

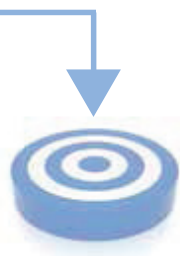
# Effective Public Health Strategies to Prevent and Control Diabetes

A Compendium



**U.S. Department of  
Health and Human Services**  
Centers for Disease  
Control and Prevention

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# ACKNOWLEDGMENTS

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When Dr. Thomas Frieden became Director of the Centers for Disease Control and Prevention (CDC) in 2009, he charged the agency to “provide sensible, practical guidance on what is most effective” and asked staff “to ensure that scarce and precious resources are allocated where they have the most potential to impact people’s lives.” Consistent with that directive, CDC’s Division of Diabetes Translation (DDT) and RTI International, with significant input from state Diabetes Prevention and Control Programs (DPCPs), began an intensive process to systematically assess the population-based strategies used by DPCPs to prevent type 2 diabetes and control the complications of diabetes. Our intent was to identify those strategies that had demonstrated reach, scalability, sustainability, measurability, and cost-effectiveness.

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## The Purpose of the Compendium

This document, *Effective Public Health Strategies to Prevent and Control Diabetes: A Compendium* (hereafter simply *Effective Strategies Compendium*), was the result of that process. We envision it being used as a reference resource that you can turn to often, but it might also be helpful for teaching about public health approaches to diabetes prevention and control. As a reference, it identifies and describes effective population-based interventions to prevent and control diabetes. The interventions work in different ways: by making sure that persons with diabetes or who are at risk for diabetes can get the care they need from health care providers; by teaching people to take care of themselves to keep from getting complications from diabetes; and by helping people to change their habits to prevent type 2 diabetes. The interventions also differ because they are meant for different groups of people, in different places, or under different circumstances.

As a teaching tool, the introductory sections, which describe how we developed this document, can also be used to describe in detail how public health organizations, including CDC and state DPCPs, are trying to better prevent and control diabetes.

While this compendium is intended primarily for DPCPs, all or part of it may be useful for:

- Persons who pay for health care related to diabetes, such as Medicare officials, insurance providers, HMOs, and others.
- DPCP partners working on public health interventions to help prevent and control diabetes.
- Programs working on public health interventions to help prevent and control other chronic diseases.

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## How the Compendium Was Developed

To help support state health departments in implementing Funding Opportunity Announcement DP09-901, DDT committed to working with DPCPs to develop ways to better measure how effectively DPCP programs achieve population-based outcomes. These measures had to be aligned with the short, intermediate, and long-term outcomes on the Logic Model for Diabetes Prevention and Control Program Grantees (see Appendix A).

**Choosing the interventions.** We collected practice-based evidence on various interventions from the DPCPs through a two-step process that involved an intensive document review and a focused interview using a standard protocol based on the Reach-Effectiveness-Adoption-Implementation-Maintenance (RE-AIM) framework. Based on the document review, we chose 26 states for follow-up interviews. RTI conducted the interviews and collected information related to how many people were served and how much diabetes-related conditions had improved. They also asked about how the interventions could be expanded to other people and places, if they could be continued over time, if there were ways to measure how well it works, and how much it would cost for the intervention to be effective. The summary of one intervention may be different from the summary of another in how much detailed information it contains. Summaries were based on the information from interviews with DPCP staff. You can read more about this process in Appendix C.

**Framework for preventing and controlling chronic disease.** At the same time, the National Center for Chronic Disease Prevention and Health Promotion (the Center) at CDC developed a four-part framework based on the Center's plan for improving health and preventing and controlling chronic disease, especially for those people in the United States most at risk. The framework promotes simultaneous efforts to address multiple chronic diseases and risk factors through interventions that address the underlying causes and the development of systems and resources that help Americans detect chronic conditions early and better manage them.

The four domains that constitute the framework are:

- 1. Epidemiology and surveillance:** Gather, analyze, and disseminate data and information; use results from evaluations to make decisions about prioritizing and delivering interventions; monitor programs and population health.
- 2. Environmental approaches:** Promote health, and support and reinforce healthful behaviors statewide in schools, worksites, and communities.
- 3. Health system interventions:** Increase the use and improve the effective delivery of preventive services and clinical care. This would help prevent disease, detect diseases sooner after onset, reduce risk factors, and control complications.
- 4. Strategies to improve community-clinical linkages:** Ensure that communities support programs that improve management of chronic conditions and clinics refer patients to these programs.

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## How This Document Is Organized

### Overall

In addition to this introductory information, the compendium provides summaries of 26 interventions implemented by DPCPs. We organized each summary into a section corresponding to one of the three core intervention areas.

- **Core Intervention #1:** Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.
- **Core Intervention #2:** Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.

- **Core Intervention #3:** Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.

The goal and objectives in CIS 1 are based on and support those in the evidence-based models, specifically the Planned Care Model (PCM) and Patient-Centered Medical Home (PCMH) model. Health care systems can improve services by incorporating the directives from these types of models, a key component of the diabetes care pathway in the national program logic model (Berenson et al., 2011; Friedberg et al., 2010; Gabbay et al., 2011; Tsai et al., 2005). Delivering high-quality care for diabetes efficiently and equitably would potentially lower health care costs and reduce disparities.

The goal and objectives in CIS 2 support diabetes self-management education/training (DSME/T) and chronic disease self-management programs (CDSMPs). Improving people's knowledge about diabetes is associated with improved self-care behaviors, improved clinical outcomes, and improved quality of life (American Diabetes Association, 2011; Partnership for Prevention, 2008). This is another key component of the diabetes care pathway on the national program logic model.

The goal and objectives in CIS 3 support the National Diabetes Prevention Program led by CDC, a public-private partnership of community organizations, private insurers, employers, health care organizations, and government agencies that is designed to bring evidence-based lifestyle change programs for preventing type 2 diabetes to communities. It is based on the Diabetes Prevention Program (DPP) research study led by the National Institutes of Health (NIH) and supported by CDC. This is the key component of the primary prevention pathway on the national program logic model.

For more information on state-based DPCPs and the National Diabetes Prevention Program, see [www.cdc.gov/diabetes/prevention](http://www.cdc.gov/diabetes/prevention).

## Intervention Summaries

We provided the following detailed information for each summary:

- **Program planning, start-up, and growth:** Describes how the intervention was started and the steps needed to develop and expand it. Each step is positioned on a timeline.
- **Implementation**
  - **Key program components:** Describes the types of people, training, equipment, and so a DPCP needs to set up that program.
  - **Required resources:** Describes the resources needed for the intervention, including full-time staff and annual budget.
  - **Implementation challenges:** Describes challenges the DPCP that developed the intervention may have experienced when it first .
  - **Implementation and maintenance tips:** Provides tips to successfully implement and sustain the intervention.
- **Evaluation approach:** Describes how the DPCP evaluated the intervention the first time it was provided, and what the DPCP learned from the evaluation, including how many people were helped, how much it improved health, process and health outcomes.

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## Issues for Consideration in Adopting an Intervention

DPCPs can review these implementation examples and the following questions (among others) while considering whether to adopt one of these interventions:

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<b><i>Would providing this intervention be supported by our DPCP's decision makers?</i></b>	<ul style="list-style-type: none"><li>● Is the intervention consistent with current practices in our health department?</li><li>● Does the intervention address one or more of our health department's priorities?</li><li>● Does the intervention address key stakeholders' (e.g., community, academic, and clinical partners) priorities?</li><li>● Will the intervention likely result in measurable outcomes that funders and decision makers want to see?</li></ul>
<b><i>Can we do this?</i></b>	<ul style="list-style-type: none"><li>● Do we have the staff, funding, and partners needed to make the intervention work?</li><li>● Can we evaluate the intervention, or hire an expert to do it, to measure how well the intervention is working?</li></ul>
<b><i>Would it be useful?</i></b>	<ul style="list-style-type: none"><li>● Would this intervention help the people we serve with a known need?</li><li>● Are there places and times in which we can provide the intervention?</li></ul>

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Note: Considerations were developed based on content from [http://ctb.ku.edu/en/tablecontents/sub\\_section\\_main\\_1152.aspx](http://ctb.ku.edu/en/tablecontents/sub_section_main_1152.aspx) and [http://www.cdc.gov/DHDSP/programs/nhdsp\\_program/docs/ABCs\\_Guide.pdf](http://www.cdc.gov/DHDSP/programs/nhdsp_program/docs/ABCs_Guide.pdf)

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## Issues for Consideration When Tailoring an Intervention

You may need to change an intervention in some ways to fit the people you are serving. Also, you may need to change how or where you provide it. But it is important that you do not change the parts of the interventions that make it work. You should contact your project officer and the person doing evaluations before you make these kind of changes. Before starting the intervention, you should also ask yourself these questions:

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<b><i>How do we plan for the intervention, get started, and expand it?</i></b>	<ul style="list-style-type: none"><li>● Who do we need to talk with and what information do we need to understand the health problems?</li><li>● Who do we need to help us get the intervention started?</li></ul>
<b><i>What are the most important parts of the intervention and what things can we change if we need to?</i></b>	<ul style="list-style-type: none"><li>● What are the most important parts that make the intervention work?</li><li>● Can we change the intervention, if we need to, even though it was tested in a group of people or a place that are not exactly the same as ours?</li><li>● What needs to be changed for the people we serve or where we provide the intervention?</li><li>● How do we need to change it?</li></ul>

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<b><i>What do we need to provide the intervention?</i></b>	<ul style="list-style-type: none"> <li>● How much money and how many people do we need to provide the intervention?</li> <li>● How can partners help us with these needs?</li> <li>● What do we need to give those partners, such as information or training, so they can help us?</li> </ul>
<b><i>What problems and challenges might we face?</i></b>	<ul style="list-style-type: none"> <li>● What do we do when we face problems or challenges when providing the intervention?</li> </ul>
<b><i>What can we do to get the intervention started and keep it going?</i></b>	<ul style="list-style-type: none"> <li>● What can we do to keep problems from happening in the first place?</li> <li>● Who else in our health department can help us to provide the intervention?</li> </ul>
<b><i>How do we evaluate how well the intervention is working and how many people it is helping?</i></b>	<ul style="list-style-type: none"> <li>● How do we know we have done what we wanted to do by providing this intervention?</li> <li>● How can we evaluate how large an area or how many people we served how many health care providers took part, and how much the intervention helped?</li> <li>● Who can help us evaluate the intervention?</li> </ul>

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# LIST OF STATE DIABETES PREVENTION AND CONTROL PROGRAM INTERVENTIONS (BRIEF DESCRIPTIONS)



This list of the interventions provides brief descriptions to help you scan for interventions that may fit your needs. Click on the links (intervention titles) to see the complete summaries for those interventions.

## Core Intervention #1:

**Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**

### 1. [Kansas Quality of Care Project](#)

Designed to address the significant diabetes burden in Kansas, particularly among lower-income populations and racial/ethnic minorities. Clinical health care providers collect and enter data into electronic registries. DPCP and clinicians use collected data to improve services.

**Target population:** Practices and clinics serving underserved minority and low-income persons with diabetes, particularly in rural areas.

### 2. [Wisconsin Collaborative Diabetes Quality Improvement Project](#)

Designed to (1) evaluate the implementation of the *Wisconsin Diabetes Essential Care Guidelines*; (2) improve diabetes care through collaborative quality improvement initiatives; and (3) share resources, strategies, and best practices.

**Target population:** All individuals aged 18–75 years with diabetes.

### 3. [Washington Patient-Centered Medical Home Collaborative](#)

Teams from 33 clinics worked together to improve primary care through adoption of the medical home model.

**Target population:** Over 780,000 patients served in the 33 participating clinics.

### 4. [Kentucky Diabetes Centers of Excellence](#)

Established a community-based program to coordinate diabetes disease management/care.

**Target population:** Medicaid recipients (aged 18 years or older and not pregnant) with diabetes; focused as much as possible on patients with high costs or at high risk for complications.

### 5. [Utah Health Plan Partnership](#)

A quality improvement initiative to improve Healthcare Effectiveness Data and Information Set (HEDIS) measures related to diabetes care. Utah DPCP partnered with nine health care plans to make system changes for insurers, the insured, health care providers, and clinics.

**Target population:** All insured persons in Utah aged 18 to 75 years.

## 6. Virginia Joint Quality Improvement Initiative with Community Health Centers

Provided training and technical assistance to implement the Planned Care Model to improve quality of care for tobacco users and persons with diabetes and/or cardiovascular disease.

**Target populations:** Persons at high risk, uninsured persons, and Medicaid and Medicare participants who have diabetes and/or cardiovascular disease and are tobacco users.

### **Core Intervention #2:**

**Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**

## 7. Michigan Partners on the Path

Brought together a network of organizations that coordinates and implements the Stanford Chronic Disease Self-Management Program across the state.

**Target population:** All persons in Michigan with diabetes, arthritis, or any other type of chronic condition.

## 8. Oregon Living Well with Chronic Conditions

Local program delivery partners provided a six-week, peer-led workshop on the Stanford Chronic Disease Self-Management Program.

**Target populations:** People with one or more chronic conditions, their supporters and/or caregivers. *Tomando Control de su Salud*, the culturally adapted Spanish-language version, targeted the Spanish-speaking segment of this population.

## 9. Virginia Chronic Disease and Diabetes Self-Management Programs

Twenty-three partner organizations delivered workshops on the Stanford Chronic Disease Self-Management Program and Diabetes Self-Management Programs.

**Target populations:** Virginia's CDSMP program targeted adults with one or more chronic conditions and their caregivers. DSMP programs targeted adults with diabetes. Low-income women with chronic conditions were targeted through collaboration with Virginia's WISEWOMAN program.

## 10. Living Well Alaska

Alaska DPCP worked with partner organizations to improve chronic disease self-management by implementing the Stanford Chronic Disease Self-Management Program.

**Target population:** Alaska adults with chronic conditions, in particular seniors, Alaska Natives, and low-income populations.

## **11. Michigan Diabetes Self-Management Certification Program**

Facilitated the development of diabetes self-management education/training (DSME/T) programs and coordinated the certification of DSME/T programs statewide.

**Target populations:** Persons with diabetes, prediabetes, or gestational diabetes, newly diagnosed or with a change in their diabetes management. Focused on Medicaid recipients with diabetes for reimbursement purposes, but DSME/T programs were open to anyone living with diabetes or prediabetes.

## **12. Texas Community Diabetes Projects**

Implemented by the Texas DPCP through contracts with local organizations offering evidenced-based diabetes interventions. Offered diabetes self-management classes, worked with local coalitions, participated in state tobacco control efforts, assisted with chronic disease surveillance activities, trained community health workers, worked with local media, and field tested diabetes education materials.

**Target populations:** Targeted persons with diabetes in medically underserved regions of Texas, including areas with high mortality rates and higher disease burden, in both rural and urban settings, including persons from racial and ethnic minority populations.

## **13. North Carolina Diabetes Education Recognition Program**

Established to increase the number of ADA-recognized diabetes self-management education/training (DSME/T) programs in the state. ADA-recognized programs can bill Medicaid, Medicare, and private insurers for self-management training.

**Target populations:** People with diabetes from several specific populations, including the uninsured and underinsured, rural African Americans, and Latina women with gestational diabetes.

## **14. Maine Diabetes Self-Management Education Program**

Coordinated a statewide program providing program recognition, technical assistance, and leadership to 32 diabetes self-management education/training program sites.

**Target population:** All Maine residents with diabetes; materials were available in English, Spanish, French, Sudanese, and Somali; outreach efforts targeted Maine tribal populations.

## **15. Texas Medicaid Diabetes Self-Management Training Pilot Program**

Established to assess the cost-effectiveness and feasibility of diabetes self-management education/training (DSME/T) as a covered benefit under Medicaid..

**Target population:** Fee-for-service and primary care case management clients with a diagnosis of type 1, type 2, or gestational diabetes, in areas of the state where contracted DSME/T services were available.

## **16. New York Medicaid Reimbursement of DSME/T Services**

Convened a task force to educate state legislators on the potential benefits of enhancing Medicaid's reimbursement policy for diabetes self-management education/training (DSME/T). Also conducted outreach to educate Certified Diabetes Educators in the state on how to submit reimbursement claims for their services.

**Target population:** Medicaid recipients who have diabetes.

## **17. Maryland Patients, Pharmacists and Partnerships Program™**

Established partnership to implement statewide the Patients, Pharmacists, and Partnerships Program™ (P<sup>3</sup> Program). The P<sup>3</sup> Program uses trained pharmacists to assist patients with medication therapy management, adherence to therapy, and chronic disease self-management.

**Target population:** Persons with hypertension, hyperlipidemia, and/or diabetes in select counties.

## **18. California “Do You cAARd?” Campaign**

Designed to increase the frequency with which diabetes educators and health care providers asked people with diabetes about their smoking status, advised them to quit, and referred them to the free Smokers’ Helpline.

**Target population:** Diabetes educators and health care providers who treat persons with diabetes who also smoke.

## **19. Vermont Community, Self-Management Support, and Provider Practice Program**

Provided training and assisted with program dissemination and follow-up self-management support (Stanford Chronic Disease Self-Management Program and Diabetes Self-Management Program) throughout the state.

**Target populations:** Adults who have or are at risk for diabetes and other chronic conditions; providers seeing those persons.

## **20. Minnesota Diabetes & Heart Health Collaborative**

A consortium of 17 leading health care organizations collaborated to develop and deliver common diabetes prevention and control messages to providers and consumers statewide to improve prediabetes and diabetes outcomes.

**Target populations:** Persons with diabetes or prediabetes and their caregivers (health care providers, lay health workers, and family members); specifically targeted seniors, Medicare beneficiaries, racial/ethnic minorities, and community health workers.

## **21. Kentucky Diabetes Today Program**

Designed to empower community leaders to examine diabetes-related challenges in their local areas and work together to improve and possibly resolve identified priority issues. Resulting interventions were tailored to the community and ranged from patient assistant programs to changes in the built environment.

**Target populations:** High-risk populations, including Appalachian regional residents, senior citizens, African Americans, Hispanics, individuals with diabetes or prediabetes; health care providers; local/state decision makers.

## **22. North Carolina Diabetes Today Program**

The curriculum developed served as a guide for engaging and mobilizing community members, health care professionals, and community institutions to form local coalitions to prevent and control diabetes. Aimed to increase access to health care services to address health disparities in vulnerable populations at risk for diabetes. Also provided community outreach, education, and awareness activities.

**Target populations:** Medicaid and uninsured populations, including African Americans, Native Americans, and Hispanic persons with type 2 diabetes.

### **23. North Carolina Diabetes Advisory Council's Advocacy and Legislative Issues Task Force**

Worked to create awareness among decision- and policy-makers of the burden of diabetes, determined the need to enact legislation or policies to enhance self-management of diabetes, and worked to ensure all payor plans provide comprehensive coverage of diabetes care.

**Target population:** Adults with diabetes.

#### **Core Intervention #3:**

**Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.**

### **24. Washington YMCA Diabetes Prevention Program**

Funded YMCAs to implement the Diabetes Prevention Program's lifestyle change curricula, and provided technical assistance to YMCA partners, including through quarterly conference calls to monitor progress on implementation, and offer guidance on recruitment. Also helped market the Y Diabetes Prevention Program.

**Target population:** Persons with prediabetes (at high risk for developing type 2 diabetes).

### **25. Minnesota I CAN Prevent Diabetes Program**

Implemented a program based on the CDC National Diabetes Prevention Program's evidence-based curriculum to help delay or prevent the development of diabetes in at-risk adults. Supported the program by building capacity among community organizations through partnership development, training, and evaluation.

**Target population:** Persons with prediabetes, with special emphasis on underserved populations and others at risk for diabetes including, but not limited to, racial/ethnic minority populations, immigrants, those with a history of gestational diabetes, and rural and low-income populations.

### **26. Montana Cardiovascular Disease and Diabetes Prevention Program**

Created a group-based lifestyle intervention program adapted from the Diabetes Prevention Program; implemented the program in person at 15 sites and via telehealth technology at six remote rural sites. Montana DPCP designed the program, secured the original funding and provided funds to the sites, recruited and trained lifestyle class trainers, and evaluated program results.

**Target population:** Overweight adults at high risk for cardiovascular disease or type 2 diabetes.



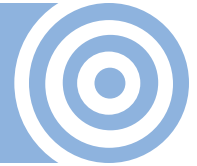
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## CORE INTERVENTION #1



**Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**

# KANSAS QUALITY OF CARE PROJECT



The Kansas Quality of Care (KQOC) Project was designed to address the significant diabetes burden in Kansas, particularly among lower-income populations and racial/ethnic minorities. The project was a modified version of the Health Resources and Services Administration's (HRSA's) Diabetes Health Disparities Collaborative. Participating providers, mainly primary care practices, collected registry data in the Chronic Disease Electronic Management System (CDEMS) and/or through electronic health records to send data to the Diabetes Prevention and Control Program (DPCP) for analysis. The DPCP worked with providers to improve quality of care based on analyzed registry data.

Core Diabetes Intervention #1	Core Diabetes Strategy 1.1
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.



## Program Planning, Start-Up, and Growth

The KQOC Project was initiated in 1999 by a coalition of health care providers (later named the Wichita Diabetes Coalition) who wanted to improve care for their diabetes patients. The Coalition wanted health outcomes data to guide how they would intervene. The Coalition implemented a pilot project with four clinics in Wichita (Sedgwick County), serving a broad range of populations (African American, Hispanic, and White). The Coalition partnered with health care providers and the University of Kansas School of Medicine to conduct a population survey in Sedgwick County that collected data on basic indicators (e.g., annual foot exams, flu vaccinations, dilated eye exams, A1C tests). Based on these data, the Coalition implemented a project modeled after HRSA's Health Disparities Collaborative by using the Planned Care Model to improve quality of care in the pilot clinics. The pilot clinics employed an electronic management system to collect data to improve quality of care for diabetes patients. After pilot data showed improvement in 2003, they began to grow the effort by seeking additional funds.

Coincidentally, the DPCP was also awarded supplemental funds from CDC that supported funding additional sites that applied for funding to implement the KQOC Project. Because much of the diabetes burden is in rural areas, the DPCP partnered with the Kansas Office of Local and Rural Health (OLRH) to obtain supplemental funding. With CDC and OLRH funding, the KQOC Project was able to support a total of 35 sites. The KQOC Project has been able to sustain itself through continued OLRH funding. In 2007, the Heart Disease and Stroke Prevention (HDSP) program received supplemental funding to join the KQOC Project. As a result, hypertension and hyperlipidemia components were added to the KQOC Project. The DPCP noted that additional efforts will be made to seek complementary funding support from other organizations and foundations within Kansas.

### Program Timeline:

1999	2000	2001	2002	2003	2004	2005	Today
• Strategic planning		• Pilot initiated in 4 sites		• Pilot data analyzed	• Supplemental funding from CDC and OLRH		• New sites added in 2007 for a current total of 69 physical sites
					• 35 programs enrolled		



**Key Stakeholders:** Coalition of health care providers, primary care private practices, local health departments, Federally Qualified Health Centers, the Office of Local and Rural Health, and other offices within the state health department.

**Target Population:** The KQOC Project targeted practices and clinics that served underserved minority and low-income persons with diabetes, particularly those who lived in rural areas.



## Implementation

### Key Program Components

- The DPCP convened a KQOC Project Team to guide the project. The team was staffed by the DPCP and HDSP with support from other programs in the Bureau of Health Promotion. The chronic disease, health promotion and injury/disability programs were housed in the Bureau of Health Promotion, enabling sharing of ideas and collaboration among programs. The KQOC Project Team obtained information on training topics from the Bureau of Health Promotion and information on cultural relevance from the Center for Health Disparities.
- The KQOC Project Team used a registry, the Chronic Disease Electronic Management System (CDEMS), to collect data on key indicators. The DPCP trained clinicians to enter data, run reports, and use the results to implement interventions and protocols to improve quality of care.
- The KQOC Project Team also provided training to clinic staff and physicians where data indicated that interventions were needed. The team provided options for interventions that can be implemented at the clinic level. For example, the team trained clinic staff to have patients take off their shoes and socks before the physician enters to improve foot exam rates.

### Required Resources

- **Staff:** The KQOC Project Team was housed in the Bureau of Health Promotion that collaborated with several chronic disease, injury, and disability programs to implement the project. This included two 1.0 FTEs and two .5 FTEs with salaries (including fringe) totaling \$204,960.
- **Funding:** The pilot was supported with CDC funding; OLRH provided supplemental funding for the additional 35 sites. Supplemental CDC funding for the Heart Disease and Stroke Program to join the Project was received in 2007 and continues to date.
- **Other:** Trainings for providers once a year at a central location; a small amount of funding for clinics (\$5,000 per year per clinic) to support staff, implement quality improvement interventions, and travel to training (not for direct patient care); a query-able software program layered over CDEMS that serves as a repository for clinic data.

### Implementation Challenges

- There was a steep learning curve for providers and staff with regard to data entry. Clinic staff had a broad spectrum of computer abilities, some with only basic computer skills.
- Another challenge involved data transfer. When they started, the DPCP was receiving data from clinics using an e-mail system, which made it very time consuming to clean the data. After 5 years, they used a software vendor to provide a Web-based solution. The DPCP can now access aggregate data from the software and query it by multiple variables. This was a more expensive option, but made data collection and analysis much more feasible.

- The clinics' transition to electronic health records has been a technological challenge. The DPCP partnered with the University of West Virginia to determine how to align the electronic health records with CDEMS so that they can continue to receive the necessary data.

## Implementation and Maintenance Tips

The KQOC Project offered several tips for successful implementation and maintenance:

- **Look broadly for partners.** It was important to look more broadly for partners than those traditionally involved in a HRSA Health Disparities Collaborative, which only funded federally qualified health centers. Kansas' diabetes burden was greater in rural areas served mainly by private practices. The DPCP wanted to help providers in the rural areas to improve quality of care.
- **Use data to market the program.** The DPCP used data from CDEMS to market this as a benefit to clinics in improving overall health of patients. In addition, clinics' experience using CDEMS better prepared them for implementation of electronic health records. This helped get providers on board to collaborate fully.
- **Focus on information management systems first.** Although the PCM had 6 components, the KQOC project focused their efforts on information management systems first. It was important to have this system in place to collect data on patients in order to know where to intervene.
- **Integrate with other programs to help sustain the program.** Integrating with other chronic disease programs and seeking funds outside of CDC were the keys to sustainability. Looking back, the DPCP would have brought in partners like health institutes and health foundations earlier to help fund the program.
- **Broaden the application to chronic disease prevention and control.** The DPCP focused on the application of the Planned Care Model for chronic disease and not just diabetes. This strengthened underlying systems across different disease areas and made PCM use more successful and sustainable.



## Evaluation Approach

The DPCP used CDEMS data to monitor the effectiveness of the program. During the period 2005 to 2008, there was 50% improvement in quality of care indicators at the clinic-level looking at aggregate de-identified patient data. They have just begun to receive patient-level data and are in the process of analyzing those data. In addition to clinical measures, such as A1C, blood pressure, and cholesterol, the project also collected diabetes care measures such as amount of physical activity, whether the provider is delivering information on physical activity and nutrition, and whether the patient is receiving diabetes education.

The program also evaluated their provider trainings. These surveys included mostly qualitative, customer satisfaction-type questions.

## Evaluation Lessons Learned

- Kansas gained additional funding by using evaluation data to show how the program could be scaled up for statewide delivery.
- It was more difficult to track the diabetes care measures (e.g., health care professionals providing diabetes education) than the clinical measures (e.g., A1C)

- There were caveats to analyzing aggregate patient data in the registry. Although this analysis revealed trends in quality improvement, it did not account for patients moving in and out of the registry or patients that have not been seen in the clinic during the reporting period. The DPCP has since changed its methodology by setting up a specific cohort within the registry at each clinic in order to monitor a consistent group of patients. This has required retraining clinics on how to collect and review data.

### Key Program Achievements

#### Process Outcomes

- 12,000 diabetes patients tracked through CDEMS from 2005–2008
- 43 funded organizations with 80 sites
- Over 350 provider participants

#### Diabetes Care Outcomes

From 2005 to 2008, data collected through CDEMS showed improvement on the following indicators:

- A1C tests provided improved from 46% to 87%
- Eye exams provided improved from 19% to 43%
- Foot exams provided improved from 26% to 56%
- Flu vaccinations provided improved from 18% to 41%
- Pneumococcal vaccinations provided improved from 7% to 19%
- Diabetes education provided improved from 13% to 47%
- Self-monitoring blood glucose rates improved from 24% to 47%
- Nutrition education provided improved from 10% to 35%
- Self-management goals set improved from 8% to 26%
- Smoking cessation counseling provided improved from 5% to 17%
- BP checked improved from 36% to 88%
- BMI calculated improved from 9% to 73%



## Related References, Resources, and Tools

- Kansas Quality of Care Project: <http://www.kdheks.gov/diabetes/qcp.htm>.

# WISCONSIN COLLABORATIVE DIABETES QUALITY IMPROVEMENT PROJECT



The Wisconsin Collaborative Diabetes Quality Improvement Project (DQIP) was a collaborative effort involving the Wisconsin Diabetes Prevention and Control Program (DPCP), the Division of Health Care Financing, the University of Wisconsin Population Health Institute (UWPHI), and numerous Wisconsin health maintenance organizations (HMOs) and health systems. This joint project was established in 1999 to (1) evaluate the implementation of the Wisconsin Diabetes Essential Care Guidelines; (2) improve diabetes care through collaborative quality improvement initiatives; and (3) share resources, strategies, and best practices.

Core Diabetes Intervention #1	Core Diabetes Strategy 1.1
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure and cholesterol, and to promote tobacco cessation.	Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.



## Program Planning, Start-Up, and Growth

In 1997, the Wisconsin Department of Health and Family Services established the Diabetes Advisory Group (DAG) with 35 partners, including HMOs. This group developed and published the first *Wisconsin Diabetes Mellitus Essential Care Guidelines*. DAG partners began to implement the guidelines and convened an initial HMO workgroup that included HMO and other health system representatives in Wisconsin. This workgroup agreed to use the Healthcare Effectiveness Data and Information Set (HEDIS) measures developed by the National Committee for Quality Assurance (NCQA) to track project progress, measure outcomes, and evaluate the implementation of the guidelines.

### Program Timeline:

1997	1998	1999	2000	2000–2011
<ul style="list-style-type: none"> <li>DAG established and guidelines developed</li> </ul>	<ul style="list-style-type: none"> <li>Guidelines implemented by DAG partners</li> </ul>	<ul style="list-style-type: none"> <li>Quality improvement workgroup convened</li> <li>All HMOs and health systems in Wisconsin agreed to participate in joint project</li> </ul>	<ul style="list-style-type: none"> <li>HEDIS diabetes measures became mandatory for NCQA-accredited HMOs</li> </ul>	<ul style="list-style-type: none"> <li>Partners met quarterly to implement collaborative diabetes quality improvement initiatives</li> </ul>

**Key Stakeholders:** Members of the DQIP included the UWPHI, MetaStar (Wisconsin's Quality Improvement Organization), Department of Health Services, Division of Health Care Access and Accountability (Medicaid Program), and HMOs and other health systems.

**Target Population:** DQIP targeted all individuals age 18–75 years with Diabetes. HEDIS data are collected from all HMO partners and included all commercially insured diabetes patients in this age group.



## Implementation

### Key Program Components

- The DPCP organized quarterly meetings where HMO partners shared strategies for improving diabetes indicators.
- The DPCP and UWPHI established measurement procedures to track program success in improving diabetes care.
- The project supported staff from UWPHI, an impartial external group, for confidential data collection and analysis.
- The DPCP and partners developed and implemented collaborative diabetes quality improvement initiatives, such as the diabetes eye exam initiative. The purpose of this initiative was to promote and encourage an annual dilated eye exam. Activities included developing a communication tool and distributing an educational eye DVD and a vision simulator card to explain diabetic eye diseases.
- The DPCP worked with Wisconsin HMOs and other health systems in the project to collect all comprehensive diabetes care measures and five other chronic disease HEDIS measures annually (cancer, cardiovascular, arthritis, asthma, tobacco).
- Project participants reviewed data annually and collectively decide to add new measures such as weight assessment and anti-depressant medication management.
- The DPCP and UWPHI prepared a draft report for review each year and distributed the final report to HMOs and other stakeholders.
- The DPCP developed multiple other diabetes resources, which are shared and distributed to HMOs and health system partners.

### Required Resources

- **Staff:** A 0.5 FTE student through the University of Wisconsin, 1 FTE project manager with clinical expertise, 1 FTE epidemiologist to support data analysis and review. Significant in-kind support from other partners.
- **Funding:** Funding was provided to “jump start” HMO collaboration in the beginning. Funding continued only to support UWPHI staff to assist with data collection and analysis.
- **Other:** Meeting space was provided in-kind. Graphic design support for final reports and printing were other required resources.

### Implementation Challenges

- There was a significant turnover in staff and quality managers. This made difficult orientation of new staff.
- Some HMOs dissolved or merged, which made it difficult to implement and sustain efforts.
- Face-to-face meetings are important to maintain partner engagement. Budget cuts have resulted in limited funds for project partners to meet face-to-face.
- Variation among plans making offering technical assistance difficult.

- The longevity of the project provided years of data. Because other state projects also collected data, the DPCP needed to assess alignment and assess whether there was duplication.

## Implementation and Maintenance Tips

The DQIP offered several tips for successful implementation and maintenance of a quality improvement program:

- **Engage stakeholders.** The DPCP engaged HMOs by bringing them together regularly to share data and organizational practices and to learn from each other regarding best practices for diabetes care. They ensured that new staff are aware of the project and engaged to ensure submission of data. They recommended designing one-page reports of individual partners' HEDIS data and keeping partners informed of HEDIS changes through regular face-to-face updates. Providing HEDIS guideline updates in an in-person forum where partners can discuss barriers, problem-solve, and identify potential quality improvement initiatives was also useful.
- **Establish trust and respect.** Assuring partners that aggregated data are confidential was very important in the beginning, as was the use of an "impartial" organization such as UWPHI to manage data. The DPCP also gave partners resources but did not tell them what to do. They assured them that there is no "right" approach for this work. They kept partners informed of HEDIS changes and developed a communication strategy that is respectful of people's busy schedules, like having weekly e-newsletters and only holding meetings when there is a full agenda.
- **Work toward the same goal.** The DPCP recommended having the group as a whole make decisions for how to use the data to ensure that everyone is working toward the same goal. They oriented and engaged new HMO quality-management staff to ensure engagement and continuity of the project.
- **Embrace change.** The DPCP noted to look for opportunities to collaborate with others when it makes sense to do so.
- **Broaden application to chronic disease prevention and control.** The DPCP focused on the application of the Planned Care Model for chronic disease, not just diabetes. This strengthened underlying systems across different disease areas and made PCM use more successful and sustainable. Wisconsin is one of four integrated demonstration sites and has expanded DQIP to five other chronic disease programs, resulting in the development of five chronic disease addendum reports.



## Evaluation Approach

To assess guideline implementation in Wisconsin's commercially insured population, collaborators selected the HEDIS comprehensive diabetes care measures, developed by NCQA. NCQA used HEDIS to accredit HMOs. The use of HEDIS criteria provided standardized data collection at the population level to assess quality of care. The HEDIS comprehensive diabetes care measures included A1C levels, blood pressure control, cholesterol/lipid screening and control, eye exam, and medical attention for nephropathy. HEDIS data included all commercially insured diabetes patients between 18 and 75 years of age.

UWPHI provided confidential patient-level data analysis and reporting for each HMO and health system, including (1) trends in performance over time, (2) variation among HMOs and health systems' performance, and (3) national performance comparisons. Every year, the DPCP reported the HEDIS measures and how current year data compared to regional and national averages.

## Evaluation Lessons Learned

- Annual assessment and discussion of how data and reports are used is important.

### Key Program Achievements

#### Diabetes Outcomes

- Eye exams improved by 9%
- LDL-C screening improved by 16%
- Nephropathy monitoring improved by 41%

#### Health Outcomes

- From 1999-2010, LDL-C control (< 130mg/dL) improved by 8%
- Poorly controlled HbA1c decreased by 9%

\*Includes only data from current definition of comprehensive diabetes care measures as NCQA has made changes.



## Related References, Resources, and Tools

- Wisconsin Diabetes Prevention and Control Program Website:  
[www.dhs.wisconsin.gov/health/diabetes](http://www.dhs.wisconsin.gov/health/diabetes)
- Wisconsin Collaborative Diabetes Quality Improvement Project Website:  
<http://www.dhs.wisconsin.gov/diabetes/hmo.htm>

# WASHINGTON PATIENT-CENTERED MEDICAL HOME COLLABORATIVE



The Washington Patient-Centered Medical Home (PCMH) Collaborative was a 2-year joint project of the Washington State Department of Health and the Washington Academy of Family Physicians. From 2009 to 2011, primary practice teams from 33 clinics worked together to improve primary care through adoption of the medical home model.

Core Diabetes Intervention #1	Core Diabetes Strategy 1.1
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.



## Program Planning, Start-Up, and Growth

For more than ten years, the Washington Diabetes Prevention and Control Program (DPCP) invested in quality improvement collaboratives to support improvement in diabetes care through use of the Chronic Care Model. The PCMH Collaborative was the most recently completed collaborative, operating from 2009 to 2011. Multiple Washington chronic disease programs invested in the collaborative, which targeted family and internal medicine clinics. The 33 PCMH Collaborative practices were selected through a competitive application process.

### Program Timeline:

2009	2010	2011
<ul style="list-style-type: none"><li>• PCMH Collaborative registration initiated</li><li>• Successful applicants notified</li><li>• First learning session</li><li>• Baseline data on provider and staff satisfaction and medical home implementation collected</li><li>• Registries loaded</li></ul>	<ul style="list-style-type: none"><li>• Registry panel frozen</li><li>• Monthly reports on clinical outcomes initiated</li><li>• Second learning session</li><li>• Third learning session and second round of evaluation data collection</li></ul>	<ul style="list-style-type: none"><li>• Fourth learning session</li><li>• Fifth learning session and final round of evaluation data collection</li></ul>

**Key Stakeholders:** Multiple chronic disease programs in the Washington State Department of Health coordinated to implement the PCMH Collaborative in partnership with the following:

- Medical specialty organizations: Washington Academy of Family Physicians
- Universities: University of Washington
- Government organizations: Department of Social and Health Services, King County Public Health, and Health Care Authority
- Insurers: Aetna Healthcare, First Choice Health Network, Regence Blue Shield of Washington, Columbia United Providers
- Health care quality organizations: Qualis Health



- Nonprofit health care systems: Group Health Cooperative of Puget Sound and the MacColl Center for Healthcare Innovation
- Primary care associations and coalitions: Washington Association of Community and Migrant Health Centers, and the Washington Primary Care Coalition

**Target Population:** Over 780,000 patients served in the 33 participating clinics, including family medicine residency clinics, community health centers, large health system clinics, and rural clinics.



## Implementation

### Key Program Components

- Practices were selected for the collaborative through a competitive application process designed to gauge practices' readiness to adopt the medical home model.
- Participating practices received *The Change Package*, a resource that contains the PCMH Collaborative curriculum and performance expectations. *The Change Package* covered 8 key themes: engaged leadership, quality improvement strategy, patient-centered interactions, organized evidence-based care, continuous and team-based healing relationships, enhanced access, population management, and care coordination.
- Over the 2-year project period, primary practice teams participated in 5 learning sessions (8 full days) and monthly Webinars led by expert faculty. Teams also received on-site quality improvement coaching through a minimum of 5 site visits from project staff and partners. A pre-work handbook, ongoing e-mail and phone contact, an e-newsletter and supports for data reporting were provided.
- Primary practice teams received a modest stipend (\$6,400) to compensate for time out of office to attend learning sessions. The stipends were supported by the contributions of partnering health plans. All other time and effort, estimated at a minimum of \$15,000 by the practices, was considered in-kind.

### Required Resources

- **Staff:** Washington State Department of Health programmatic staff, quality improvement coaches, and PCMH Collaborative faculty, including a 0.70 FTE from the Washington DPCP who assisted with quality improvement planning and coaching and the DPCP's lead epidemiologist.
- **Funding:** The Washington DPCP contributed \$50,000 to the PCMH Collaborative project budget. Multiple Washington State Department of Health chronic disease programs, including those addressing tobacco, diabetes, heart disease and stroke, asthma, and cancer, contributed to the PCMH Collaborative project budget. The overall estimated cost of the collaborative was \$350,000 a year plus in-kind contributions from partners and stakeholders.
- **Other:** Data collection tools included the Medical Home Index self-assessment tool, patient experience survey, and provider and staff satisfaction surveys. *The Change Package* included the PCMH Collaborative curriculum and performance expectations. Contractors or consultants were needed to develop and provide technical assistance for registries.

## Implementation Challenges

Two major challenges were experienced during PCMH Collaborative implementation:

- Without related changes to reimbursement policy, quality improvement initiatives are difficult to promote, implement, and sustain. Currently, all practices participating in the PCMH Collaborative but one were operating in a standard fee-for-service environment while waiting for financial incentives to catch up.
- Health department processes and systems did not support integrated funding or expenditure tracking for a cross-program project. Investments from multiple Washington State Department of Health chronic disease programs helped to address limited funding for the PCMH Collaborative, and a health department subcommittee reviewed fiscal policies and procedures to identify changes to facilitate an integrated funding model.

## Implementation and Maintenance Tips

The Washington DPCP offered several tips for successful implementation and maintenance of a PCMH Collaborative:

- **Screen applicants.** Screening practices and choosing those that have a state of readiness for medical home implementation was essential.
- **Avoid being overly prescriptive.** The DPCP was not overly prescriptive with practices in terms of the rate of change. They noted that being too prescriptive can cause change “intervention fatigue” among health care providers and thwart quality improvement efforts.
- **Communicate effectively.** The DPCP conducted an informed process on the front end and shared their expectations with practices to ensure that everyone was on the same page. *The Change Package* provided a framework with a minimum set of expectations.



## Evaluation Approach

PCMH Collaborative practices submitted monthly narrative progress reports. Systems changes were measured by the Medical Home Index, which participating clinic teams self-administered as a team annually throughout the project period. Primary care provider and staff satisfaction surveys were also completed annually, and a patient experience survey was conducted twice during the project period. Practices submitted monthly data reports on eight quality measures:

1. > 70% blood pressure documented in the last year < 130/80 mmHg
2. > 70% LDL control < 100 mg/dL
3. < 5% most recent A1C level > 9.0%
4. > 80% received dilated eye exam
5. Received foot exam\*
6. > 90% tested for nephropathy or already under treatment
7. Among those who use tobacco, > 90% counseled to stop tobacco use
8. Smoking query during last visit\*

Goals were from the Robert Wood Johnson Foundation, Improving Performance in Practice Program (IPIP). These goals were set at “very good care” and based on national standards.

\*No goal identified by IPIP.

## Evaluation Lessons Learned

- Clinics may vary in their ability to provide data. Not all clinics contributed clinical outcome data to the combined results each month. Monthly reporting ranged from 18 to 31 clinics in the combined analysis. Some clinics were only able to begin reporting data to the Department of Health midway through the PCMH Collaborative. Other clinics experienced challenges in continuing to report due to electronic medical records implementation and other factors. Therefore, individual clinic improvement was also assessed. Several individual clinics had improvements of at least 5 percentage points from baseline to most recent measurement in the 8 quality measures for their patients with diabetes.
- Patient experience was overwhelmingly positive at baseline. Overall, patients reported moderate improvements in their experience, but response rates created an insufficient sample to draw conclusions with statistical significance. Additional resources for more intense follow-up may help increase response rates and allow evaluators to assess bias in reporting experiences. Increased funding for translating language versions of the patient experience survey would have also increased our ability to assess the experience of non-English speaking patients.
- Progress made in the process of care measures may reflect actual improvements in patient outcomes or improvements in clinics' ability to track the measures.

### Key Program Achievements

#### Process Outcomes

- 31 out of 33 primary care practices remained engaged at the end of the PCMH Collaborative
- 770 providers and ancillary clinical professionals worked at the participating clinics
- Participating practices served over 738,111 patients

#### Systems Change

- On average, practices' overall score on the Medical Home Index improved over the 2-year collaborative

#### Diabetes Care Outcomes

Clinic data were combined to assess overall performance. The measures are ordered from most to least improved. From January 2010 to August 2011, the following outcomes were found:

- Patients receiving cessation counseling at last visit, among smokers, improved from 53% to 82%
- Patients receiving a foot exam improved from 49% to 71%
- Patients receiving a smoking query at last visit improved from 64% to 78%
- Patients receiving medical attention for nephropathy improved from 68% to 76%
- Patients receiving an eye exam decreased from 49% to 47%

#### Health Outcomes

- Patients whose latest A1C was > 9% improved from 27% to 19%
- Patients whose latest blood pressure was < 130/80 mmHg improved from 40% to 50%
- Patients whose latest LDL was < 100 mg/dL improved from 42% to 51%



## Related References, Resources, and Tools

- Washington Patient-Centered Medical Collaborative Website:  
<http://www.pcpcc.net/pilot/washington-patient-centered-medical-home-collaborative>
- Medical Home Index:  
[http://www.medicalhomeimprovement.org/pdf/CMHI-MHI-Adult-Primary-Care\\_Full-Version.pdf](http://www.medicalhomeimprovement.org/pdf/CMHI-MHI-Adult-Primary-Care_Full-Version.pdf)
- Provider and Staff Satisfaction Survey:  
[http://www.medicalhomeimprovement.org/pdf/Adult-CAHPS-Clinician\\_Group-Survey.pdf](http://www.medicalhomeimprovement.org/pdf/Adult-CAHPS-Clinician_Group-Survey.pdf)

# KENTUCKY DIABETES CENTERS OF EXCELLENCE



The **Kentucky Diabetes Prevention and Control Program (KDPCP)**, in partnership with the Kentucky Department for Medicaid Services (DMS), established a community-based diabetes disease management/care coordination program targeting Medicaid members with diagnosed diabetes in six regions of the state. The program achieved increased levels of patient self-management (medication compliance, self-foot exams) and diabetes care outcomes (A1C, eye exams, immunizations).

Core Diabetes Intervention #1	Core Diabetes Strategy 1.1
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.



## Program Planning, Start-Up, and Growth

As a result of ongoing educational efforts to decision makers by the Kentucky Diabetes Network, local coalitions, and other stakeholders, state funds for diabetes not only have been maintained but have increased in recent years. The Department for Public Health (DPH), which includes the KDPCP, and the DMS are both located within the Cabinet for Health and Family Services in Kentucky. An opportunity to work together came in 2006 when a portion of an increase in the state diabetes funds was designated for establishment of regional Diabetes Centers of Excellence (DCOE). The DCOEs targeted Medicaid recipients with the goal of improving self-management skills, preventive care measures, and health outcomes related to diabetes, as well as controlling costs for Medicaid. The KDPCP has had a state-funded local health department component as part of their program for several years; the DCOE program was an opportunity to build on this structure. A request for proposal process was used to select the six local health departments where the centers were to be established. The KDPCP took the lead in designing specifics for the program. The six key strategies of the program were outreach, care coordination, diabetes self-management education/ behavior change support, communication with primary care providers, documentation/data collection, and strategies to promote changes in the health care system.

Because the DCOE program was located within local health departments that are also part of a state-wide diabetes prevention and control program, the two projects were able to support from one another. Discussion regarding expansion of the DCOE to additional sites took place for some time; however, this has not happened. A decision was made to implement Medicaid Managed Care in Kentucky, making the future of the DCOEs uncertain.

### Program Timeline:

2006	2007	2008	2009	2010	2011
<ul style="list-style-type: none"> <li>State funds identified</li> <li>RFP developed</li> <li>Six DCOE sites selected</li> </ul>	<ul style="list-style-type: none"> <li>In-house data system developed</li> <li>DCOE staff training conducted</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing staff training and conference calls held</li> <li>New Diabetes Education electronic medical record chosen</li> <li>Negotiations with Medicaid for possible expansion initiated</li> </ul>	<ul style="list-style-type: none"> <li>New data system implemented and training conducted</li> <li>Full-time DCOE coordinator hired</li> </ul>	<ul style="list-style-type: none"> <li>Negotiations for statewide implementation discontinued</li> </ul>	<ul style="list-style-type: none"> <li>Medicaid managed care implemented</li> </ul>

**Key Stakeholders:** Kentucky DMS, Kentucky Department for Public Health/Kentucky Diabetes Prevention and Control Program, local health departments, primary care providers, Medicaid members with diabetes.

**Target Population:** Medicaid recipients (aged 18 or older and not pregnant) with diabetes in the service areas of 6 local health departments in Kentucky (total of 33 counties). Although a formal risk stratification process was not used, focus was placed as much as possible on patients with high costs or at high risk for complications. Some sites also served patients who are uninsured or who have private insurance.



## Implementation

### Key Program Components

#### Program Design

- The KDPCP led the design of the program, established program standards, and oversaw data system development. They also took the lead in conducting ongoing meetings with the DMS for their input and approval.
- The KDPCP led the request for proposal process and worked with the selection committee.
- The KDPCP provided the initial training of DCOE and Medicaid staff. They continued to provide ongoing training and technical assistance and monitoring, including quarterly record reviews, site visits, monthly conference calls and individual assistance as needed. The DMS staff provided a few training components on topics such as accessing eligibility information and Medicaid benefits.

#### Program Implementation

- Medicaid recipients with diabetes from the DCOE service area could refer themselves, be referred by their provider, or become known to the program via patient lists provided by DMS.
- This model used local staff who were familiar with existing community resources and who had a rich history of providing community-based diabetes self-management education/training (DSME/T) and support.
- The KDPCP worked with the local DCOE staff to develop promotional materials for patients and DCOE sites implemented various outreach strategies to engage and enroll the targeted population such as mailings, phone contact, local media messages, and face-to-face encounters at local events. The DMS also informed appropriate members about the program. The KDPCP worked with DMS and local DCOE staff to develop promotional materials for providers.
- DCOE sites implemented various strategies to build or strengthen partnerships with providers, including office visits, lunch-and-learn sessions, presentations to groups of providers, and mailings. The regional DMS nurses participated or provided local support in these efforts, and the DMS also solicited provider support via mailings. Providers were encouraged to refer clients, accept patients that need a medical home, receive information from the DCOE on services provided, adopt use of tools for medical management, and share patient lab results with DCOE.
- DCOE staff conducted individual needs assessments, provided education that incorporated topics consistent with nationally recognized programs (group, one-on-one, and/or Medical Nutrition Therapy), and provided ongoing behavior change support to assist enrolled participants to

better manage their diabetes based on identified needs in cooperation with their primary care provider.

- DCOE staff assisted participants with medical appointments; access to needed equipment and supplies; solutions to barriers to care and self-management; and referral to community resources such as diabetes support groups, smoking cessation classes, opportunities for physical activity, chronic disease self-management classes, or other community programs.
- DCOE staff shared tools, models, and best practices to support care improvement in primary care offices.

## Data Management

- DCOE staff used a Web-based data management system, DiaWEB, to enter/track self-management and clinical data for their program participants. KDPCP staff administered DiaWEB and used it to summarize data across regional sites.

## Required Resources

- **Staff:** Staffing varied slightly by site and has evolved over the course of the program; however, each of the six sites had at least one FTE disease manager (a registered nurse or registered dietitian; a certified diabetes educator is preferred but not required), access to a registered dietitian for Medical Nutrition Therapy, and access to clerical support. At the state level, there was a full-time DCOE program coordinator. Significant in-kind support was also provided by KDPCP staff.
- **Funding:** \$750,000 in Year 1 and \$1.5 million annually thereafter supported the state-level staff, the DCOE staff, and operating expenses at each of the 6 local health department DCOE sites, the data management system, and materials.
- **Other:** A data management system with user-friendly reporting functions that tracked and integrated data for disease management, diabetes self-management education, and clinical measures. After development and initial use of a less-than-optimal data management system in house, a decision was made to purchase commercially available software and have it customized. It was originally designed to track DSME/T data but has been customized to meet the needs of the program.

## Implementation Challenges

- Reaching/enrolling Medicaid patients was a significant challenge for a variety of reasons, including lack of up-to-date contact information, transportation challenges in rural areas, and competing priorities.
- The DCOE provided no clinical services, focusing instead on education and care coordination services; therefore, clinical data (e.g., A1C) must be shared with the DCOE by the provider. Some providers saw this as a burden, and it can take time to establish good working relationships.
- Finding/creating an appropriate data system was challenging since the DCOE model encompassed disease management, care coordination, diabetes education, population-level (aggregate) quality improvement, and more. There were data systems that managed any one of these things well, but finding one that can bring them all together was difficult.
- Fiscal realities caused the DMS to examine, and ultimately implement, Medicaid Managed Care in Kentucky. Disease management services provided by the Managed Care Organizations were seen as duplicative of DCOE services. DPH budget cuts have also impacted funding for the project.

## Implementation and Maintenance Tips

The Kentucky DCOE offered several tips for successful implementation and maintenance of a similar type of program:

- **Ensure qualifications of the DCOE.** The local health departments selected to become DCOEs all had strong professional staff with experience delivering group DSME/T programming to low-income residents. In addition, staff at these sites had knowledge of community resources to assist in addressing some barriers as well as existing relationships with primary care providers in the community. The DPCP recommended that this infrastructure be in place before implementing a DCOE program.
- **Establish quality documentation practices.** An electronic patient record/data management system was vital for managing and documenting all aspects of the program (e.g., patient encounters, clinical information, referrals, barriers, correspondence with providers) and for documenting program outcomes. The DPCP recommended a Web-based system if there are to be multiple program sites with state or regional oversight.
- **Staff appropriately.** The project team had clinical expertise in diabetes, preferably including a CDE, as well as expertise in disease management/care coordination if possible. Having staff who lived and worked in the communities they served was a real strength of the program.
- **Allow flexibility in service delivery.** The KDPCP allowed individual sites to use different approaches for DSME/T and disease management service delivery (hiring new staff vs. using existing staff, delivering services face-to-face vs. over the phone).



## Evaluation Approach

The process and outcome measures noted below have been incorporated in the evaluation approach for the Medicaid diabetes population enrolled in the DCOE interventions. These measures were collected and entered in the DiaWEB program data management system by the DCOE staff. Some of the measures were self-reported, while the laboratory values were supplied to the DCOE by primary care providers. All data were entered into the system by DCOE staff. Process and outcome measures were all retrievable from DiaWEB.

### Process Measures:

- Completion of patient assessment on program entry
- Development of individualized Plan of Care
- Provision of lab results by primary care provider
- DCOE staff request lab results from primary care provider

### Outcome Measures:

- Medication compliance in non-compliant patients
- Self-monitoring of blood glucose (SMBG) in patients with A1C baseline above 9%
- Daily self-foot exams
- Annual dilated retinal exams
- Flu and pneumococcal immunization
- Two or more A1Cs recorded in the system



## Evaluation Lessons Learned

- An electronic health record or automated disease registry is necessary to track and report data on clinical outcomes.
- Despite the availability of an electronic health record, cohort reporting was not possible with the existing system. Rather, data was reported on a cross-section of the population at designated time intervals. The DPCP is continuing to work on addressing this issue.

### Key Program Achievements

Data from 2010–2011, the first full year of operation of the Web-based data system:

#### Process Outcomes

- 95% with patient assessment completed
- 90% with individualized care plan
- 93% with primary care- provider provided lab results
- 95% with request of labs from primary care provider

#### Diabetes Care Outcomes

- 40% of non-compliant<sup>a</sup> patients with improvement in medication compliance<sup>b</sup>
- 50% of patients (with A1C baseline above 9%) with increased SMBG monitoring frequency
- Foot exams increased from 36% to 71%
- Eye exams increased from 24% to 54%
- Flu vaccination increased from 37% to 66%
- Pneumococcal vaccination increased from 33% to 49%
- 74% with 2 or more A1Cs recorded in the system

#### Health Outcomes

- 54% had 1 point or more decrease in A1C
- Average A1C decreased from 10.2% to 8.8%

<sup>a</sup> Non-Compliance = Missing/skipping their diabetes medication 2–3 times a week or more

<sup>b</sup> Compliance = Never missing diabetes medication or missing less than once a week.



## Related References, Resources, and Tools

- Chiron Data Systems Website: <http://www.chirondata.com/>
- Improving Chronic Illness Care Website: <http://improvingchroniccare.org/change/index.html>
- National Diabetes Education Program Better Diabetes Care Website: <http://www.betterdiabetescare.nih.gov/>
- Pfizer Inc. *The Patient Health Questionnaire* (PHQ9): [http://www.cqaimh.org/pdf/tool\\_phq9.pdf](http://www.cqaimh.org/pdf/tool_phq9.pdf)
- Rosenzweig, J. L., Weinger, K., Poirier-Solomon, L., & Rushton, M. (2002). Use of a disease severity index for evaluation of healthcare costs and management of comorbidities of patients with diabetes mellitus. *American Journal of Managed Care*, 8, 950–958.



The Utah Health Plan Partnership (UHPP) was a quality improvement initiative to improve Healthcare Effectiveness Data and Information Set (HEDIS) measures related to diabetes care. Over the past 13 years, the Utah DPCP has partnered with 9 health care plans to implement major systems changes for the health plans, their members, physicians/providers, and clinics. These changes included adoption of Utah Diabetes Practice Recommendations, inclusion of quality assurance measures in Medicaid managed care contracts, and standardized collection of HEDIS data (including the 9 HEDIS Diabetes Quality Improvement Project measures).

Core Diabetes Intervention #1	Core Diabetes Strategy 1.1
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.



## Program Planning, Start-Up, and Growth

The UHPP was initiated in 1998 to address quality improvement as a public health strategy. The Utah DPCP contacted several health plans to discuss how to improve diabetes outcomes by using clinical information systems. Nine health plans agreed to participate beginning in 1999; since then, the group has met monthly with an annual planning meeting held in November and has conducted quality improvement initiatives with data tracking. In 1998, CDC provided the initial funds to develop the UHPP. As of April 2011, health plans were no longer supported with any external source of funds, including CDC resources; however, eight of the nine plans have agreed to stay on board. Future collaborations may include major pharmacies.

### Program Timeline:

1998	1999	2000-2010	2011
<ul style="list-style-type: none"> <li>Program initiated with CDC funds</li> <li>Health plans recruited</li> </ul>	<ul style="list-style-type: none"> <li>First meetings held</li> </ul>	<ul style="list-style-type: none"> <li>Monthly meetings held</li> <li>Quality improvement initiatives with data tracking conducted</li> </ul>	<ul style="list-style-type: none"> <li>Program maintained without CDC funds</li> </ul>

**Key Stakeholders:** Major health plans in the state and Medicaid health plans

**Target Population:** UHPP targeted all insured persons in Utah aged 18 to 75.



## Implementation

### Key Program Components

- Participating plans had an electronic medical record (EMR) clinical information system in place that provided data to HEDIS on key diabetes measures.
- A DPCP analyst reviewed the HEDIS data to assess improvements on A1C, blood pressure, cholesterol, eye exams, and nephropathy screening.
- Each health plan received a report on these health outcomes, including population impact, and measures progress. They used these measures to determine goals for the next calendar year and implemented interventions to affect change in targeted areas.
- The DPCP developed the Utah Diabetes Practice Recommendations adapted from ADA clinical recommendations and the Intermountain Healthcare process model. Participating plans disseminated the practice recommendations to their providers.

### Required Resources

- **Staff:** An analyst to examine the HEDIS data (0.10 FTE); a program coordinator to manage the monthly collaboration, distribute reports, and plan the November planning meetings (0.25 FTE).
- **Funding:** Until March 2011, the state allocated approximately \$80,000 annually for this project, with CDC funds. As of April 2011, the eight health plans then sustained the partnership with their own resources.
- **Other:** EMR clinical information system, patient education materials, promotional materials.

### Implementation Challenges

- The loss of CDC funds posed a challenge to implementation as it contributed to one plan having to drop out of the program.

### Implementation and Maintenance Tips

- **Involve a qualified analyst in data review and change assessment.** All of the HEDIS data came to the state health department. Having a qualified analyst to review the data and assess change was critical.
- **Use an EMR system and electronic registry.** Having an adequate EMR clinical information system in place was a critical component for measuring outcomes. Utah was 1 of 17 sites involved in the Beacon Project, which sought to improve interconnectivity among health systems. In Utah, the Beacon Project focused exclusively on diabetes care measures, including A1C, blood pressure, LDL cholesterol, foot exams, kidney screening, and eye exams. The EMR allowed providers to see patients' charts and the tests patients needed.
- **Collaborate and identify champions.** It was important to have buy-in and collaboration with the health plans. The quality improvement teams of the participating health plans were committed to the program. There were champions at the health plans who have been involved since the beginning of the program and have built this program into their organization with sustainability at the forefront.

- **Employ a systems-based approach.** Using a systems-based approach was a model for other states. Wisconsin and California implemented similar initiatives, and Utah provided recommendations to these states based on their model.
- **Provide training to health plans.** Providing training to health plans was important to the success of the program. Health plans needed training on the use of HEDIS measures and interventions that can affect measures.



## Evaluation Approach

HEDIS data were used for evaluation and to inform strategic planning and goal setting for the coming project year. A state health department analyst received HEDIS data directly from health plans and assessed changes in patient data over time. The DPCP analyst provided a report to each plan on outcomes and progress.

## Evaluation Lessons Learned

- Competitive health plans worked together for the benefit of population health, with HEDIS measures as the guiding framework.
- It was imperative to place primary emphasis on action steps and the progress of health plans, with end results as the secondary focus.
- The DPCP was able to create contact with providers who are paid by multiple plans, thereby improving provider education and engagement.
- It was important to have clear evaluation plans before implementing initiatives, as sound evaluation justified the initiatives to stakeholders.

### Key Program Achievements

#### Process Outcomes

- 75% of all insured patients were represented in the HEDIS data

#### Diabetes Care Outcomes

- From 2004 to 2009, select diabetes HEDIS measures have improved:
- Eye exam rate increased from 41.9% to 64%
- Nephropathy screening increased from 33.3% to 69.3%

#### Health Outcomes

- A1C < 7% increased from 23.5% to 42.7%
- LDL < 100 mg/dL increased from 17.8% to 45.2%



## Related References, Resources, and Tools

- Utah Health Plan Partnership Website:  
<http://health.utah.gov/diabetes/healthplanpartnership/index.htm>

# VIRGINIA JOINT QUALITY IMPROVEMENT INITIATIVE WITH COMMUNITY HEALTH CENTERS



The Virginia Diabetes Prevention and Control Program (DPCP) provided training and technical assistance on implementation of the Planned Care Model (PCM) to improve the quality of care provided for tobacco users and persons with diabetes and/or cardiovascular disease who were patients in Virginia's community health centers (CHCs). This initiative was implemented through a joint contract between the DPCP, the state Heart Disease and Stroke Prevention (HDSP) Program, the state Tobacco Use Control Program (TUCP), the Community Care Network of Virginia (CCNV), and the Virginia Community Health Care Association (VCHA).

Core Diabetes Intervention #1	Core Diabetes Strategy 1.3
Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	As a complement to work occurring under strategies 1.1-1.2, promote health communication campaigns or coalition initiatives that will contribute to improving the quality of clinical care for people with and at risk for diabetes.



## Program Planning, Start-Up, and Growth

To pool resources and coordinate quality improvement efforts, a joint contract between the Virginia Department of Health's (VDH's) DPCP, HDSP, and TUCP, and the Community Care Network of Virginia (CCNV) and Virginia Community Healthcare Association (VCHA) was established. The DPCP and other VDH programs worked in partnership with the VCHA, a statewide organization for CHCs to provide resources, training, and technical assistance to CHCs on the use of the PCM to improve quality of care. The CCNV was the only statewide health center-controlled network (HCCN) in the nation. CCNV supported clinical quality improvement activities.

### Program Timeline:

2002	2004	2007	2009	2010	2011
• Partnership formed between DPCP, HDSP, and VCHA, CCNV	• Formal contract between VDH and VCHA established	• VCHA began tracking PCM best practices	• Project partners began developing logic model and evaluation plan	• Self-management programs needs assessment conducted	• Assessment of Chronic Disease Care implemented

**Key Stakeholders:** 60 CHCs, 153 providers, and various state government and non-governmental partners including VDH chronic disease programs, community and primary health care associations and networks.

**Target Population:** Through CHCs, the DPCP served high-risk uninsured, Medicaid and Medicare participants who have diabetes and cardiovascular disease and tobacco users.



## Implementation

### Key Program Components

- The DPCP and HDSP contracted with CCNV to develop a Smart Form to enhance electronic medical record (EMR) systems used by participating CHCs allowing them to collect common data elements to support and monitor quality improvement interventions.
- The DPCP, with state partners, established a performance monitoring system using the EMR to gather and distribute data and to measure progress towards performance targets for 14 sites.
- The DPCP, with state partners, conducted needs assessments with participating CHCs to identify gaps and design targeted quality improvement interventions.
- The DPCP, HDSP and TUCP provided resources, training and technical assistance to participating CHCs through the VCHA.

### Required Resources

- **Staff:** Full-time evaluator or contractor to spearhead evaluation activities with CCNV and at least 0.15 FTE from each participating state program manager (TUCP, HDSP, and DPCP).
- **Funding:** FY 2012 funding from the CDC was \$104,000 for the initiative. Funds were used to (1) conduct assessments and trainings, (2) contract with an evaluator, and (3) receive data from participating CHCs.
- **Other:** Performance measurement system and diabetes tools and materials.

### Implementation Challenges

The Virginia's Joint Quality Improvement Initiative faced a few major challenges in implementing the joint initiative:

- There were competing requirements by funders placed on CHCs regarding patient care and case-load management that has reduced the time staff can be away from the clinic for training and involvement in quality improvement efforts.
- It took up to a year for CHCs to install and implement an EMR system, and to meet the requirement that data be reported for a year before it could be aggregated.
- Providers were reluctant to provide un-blinded site-level data due to confidentiality concerns about market competition. This made it challenging to effectively link PCM intervention strategies to data outcomes.
- CHCs were moving toward Patient Centered Medical Home (PCMH) recognition and/or accreditation, which had components common to PCM, but was more in line with national reimbursement priorities that helped with sustainability.

### Implementation and Maintenance Tips

The Virginia Joint Quality Improvement Initiative offered several tips for successful implementation and maintenance:

- **Collaborate across public health program.** Sharing resources and coordinating development and implementation of data collection was important for success of the program.

- **Don't build from scratch.** The DPCP influenced CHCs to augment their existing structures, like EMR data systems, to enhance diabetes care and make the program sustainable. Building on recent PCMH initiatives for diabetes was a way to motivate CHCs to enhance care for patients.
- **Start small.** The DPCP started with a small and stable cohort of CHCs to implement PCM intervention strategies and tracked patient outcomes to improve quality of care.



## Evaluation Approach

DPCP collected baseline data for A1C, blood pressure and cholesterol control. The data were collected for an initial cohort of patients being served by seven CHCs, which will allow for tracking of improvements in these measures over time. The DPCP used a modified version of the *Assessment of Chronic Illness Care* (ACIC) tool titled *Assessment of Chronic Disease Care* (ACDC) to assess implementation of the PCM. Additionally, the DPCP conducted needs assessments of CHC self-management programs and used this information for determining training needs.

## Evaluation Lessons Learned

- It was important to conduct needs assessment at site level to help tailor technical assistance and training needs and avoid “intervention fatigue.”

### Key Program Achievements

#### Process Outcomes

- The number of sites using the PCM increased from 48 to 70
- The number of participating CHC providers using the Planned Care Model increased from 93 to 153

#### Health Outcomes

- The percent of patients with A1C control of < 7% increased from 47% to 50%\*
- The percent of patients with LDL control of <100 mg/dl increased from 43% to 46%\*
- The percent of patients with diabetes achieving LDL control increased from 54% to 56%\*
- The percent of patients with blood pressure control of <130/80 mmHg increased from 30% to 33%\*

\*Virginia DPCP was unable to link its intervention strategies to changes in reported health outcomes for CHCs, as the center identities were blinded for the first 3 years of the project. The health outcome changes may or may not have been directly influenced by this quality improvement initiative.



## Related References, Resources, and Tools

- Community Care Network of Virginia (CCNV) Website:  
<http://www.ccna.com/services/quality-improvement/>
- Assessment of Chronic Illness Care (ACIC) tool Website:  
[http://www.improvingchroniccare.org/downloads/acic\\_v3.5a.pdf](http://www.improvingchroniccare.org/downloads/acic_v3.5a.pdf)



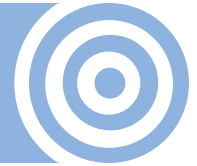
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## CORE INTERVENTION #2



**Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**





Michigan Partners on the PATH (MI PATH) was a network of organizations that coordinates and implements the Stanford Chronic Disease Self-Management Program (known as PATH in Michigan) across the state. Integral to this unique partnership were the Michigan Department of Community Health (MDCH) the Diabetes and Arthritis Programs, and the Office of Services to the Aging (OSA), which together built the infrastructure to sustain CDSMP.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality of life outcomes for people with diabetes.



## Program Planning, Start-Up, and Growth

In 2005, the MDCH Diabetes and Arthritis Programs and the Office of Services to the Aging (OSA) partnered to build a system for coordinating, implementing, and expanding the reach of the Stanford CDSMP in Michigan. MI PATH was first convened with core representatives from the Michigan State University Extension (MSUE), OSA, and MDCH. Currently, MI PATH has more than 60 participating organizations—including foundations, community agencies, and outreach networks—that are allied to support delivery of CDSMP throughout the state.

### Program Timeline:

2005	2007	2012
• MI PATH convened	• Centralized data collection began	• 1,085 workshops held since 2007

**Key Stakeholders:** MDCH Diabetes and Arthritis Programs, OSA, MSUE, Health Alliance Plan, Arthritis Foundation Michigan, National Kidney Foundation of Michigan, Upper Peninsula Diabetes Outreach Network, and regional Area Agencies on Aging.

**Target Population:** All persons in Michigan with diabetes, arthritis, or any other type of chronic condition.



## Implementation

### Key Program Components

- The statewide partnership had 17 licensed agencies that deliver MI PATH in the community. Sites include senior centers, recreational facilities, hospitals, health departments, churches, and other locations that are easily accessible.

- The program implemented the Stanford CDSM model without modifications. MI PATH worked to maintain the fidelity of the program by pairing experienced leaders with new leaders, providing a New Leader Manual, holding refresher trainings, convening annual meetings and providing technical assistance. Master trainers were also encouraged to conduct fidelity checks on newly trained leaders.
- Over a period of 5 years, MDCH sponsored 7 statewide “train the trainer” programs, conducted by Stanford T-Trainers, to train master trainers, who then train lay leaders. MI PATH also provided technical assistance to leaders and filled-in for leaders in the community as needed.
- The program developed a formal referral process.

## Required Resources

- **Staff:** Arthritis Program, 1.5 FTE.
- **Funding:** Support for PATH (CDSMP) has been provided by the MDCH Arthritis Program (funded by CDC), the MDCH Diabetes Program, the Division of Chronic Disease and Injury Control, OSA, and the National Kidney Foundation of Michigan. The cost of conducting the workshops was modest once leaders are trained.
- **Other:** Costs for training lay leaders (trainers, materials, lending libraries). Some of these supplies needed to be replenished periodically.

## Implementation Challenges

- Consistent recruitment of participants has been difficult across the state. Champions within the community, ideally past participants or health care providers, marketed the program to help with recruitment.

## Implementation and Maintenance Tips

MI PATH offered several tips for successful implementation and maintenance of CDSMP in the community:

- **Implement the Stanford model with fidelity.** The DPCP recommended providing technical assistance and pairing experienced leaders with less experienced leaders to help maintain fidelity.
- **Stress the importance of collaboration and commitment among the partners.** The DPCP provided master training across agencies to build camaraderie. Staff from the Arthritis Foundation and the Kidney Foundation conducted a workshop together, which resulted in sharing of ideas and resources as well as staff collaboration.
- **Use members of the partnership to promote sustainability.** To promote sustainability, members of the coalition applied for different funding streams.
- **Market the program.** Promoting the program on Websites and with brochures and flyers at key locations were effective strategies for marketing.



## Evaluation Approach

There was a statewide evaluation that tracks program reach and participant demographics. MI PATH obtained buy-in from partners to make evaluation a collective initiative. The program also tracks completion rates, which are used as a proxy indicator of fidelity to the Stanford model (70%–75% of participants must attend at least 4 of 6 classes).

## Evaluation Lessons Learned

- In return for providing training to lay leaders, the DPCP asked that they participate in data collection.
- By implementing the program with fidelity, funds were not necessarily needed to track health outcomes. The Stanford CDSMP has already demonstrated that, if participants complete the program with fidelity, health outcomes are improved.

### Key Program Achievements

#### Process Outcomes

- 1,085 workshops delivered
- 11,162 patients reached
- 96% of participants continue to use techniques learned in workshop and would recommend workshop to family/friends



## Related References, Resources, and Tools

- <http://patienteducation.stanford.edu/>
- <http://mihealthyprograms.org/mipath.aspx>
- Participant Information Form (Collected at Session 1):  
[http://www.mihealthyprograms.org/documents/PATH\\_Participant-07.12.10.pdf](http://www.mihealthyprograms.org/documents/PATH_Participant-07.12.10.pdf)
- Attendance log:  
[http://www.mihealthyprograms.org/documents/PATH\\_%20AttendanceLog\\_07.12.0.doc](http://www.mihealthyprograms.org/documents/PATH_%20AttendanceLog_07.12.0.doc)
- Workshop Evaluation Form (Collected at Session 6):  
[http://www.mihealthyprograms.org/documents/PATH\\_Evaluation-07.12.10.pdf](http://www.mihealthyprograms.org/documents/PATH_Evaluation-07.12.10.pdf)
- Sample budgets for setting up CDSMP (developed by National Kidney Foundation of MI):  
[http://www.mihealthyprograms.org/documents/newleaderkit/3.Budget\\_10-10web.pdf](http://www.mihealthyprograms.org/documents/newleaderkit/3.Budget_10-10web.pdf)

# OREGON LIVING WELL WITH CHRONIC CONDITIONS



Living Well with Chronic Conditions (Living Well) was Oregon's version of the Stanford Chronic Disease Self-Management Program (CDSMP), a 6-week, peer-led workshop for people with 1 or more chronic conditions and their supporters. Local program delivery partners, including community-based organizations, local public health authorities, aging services providers, clinics, hospitals, and insurers, conducted CDSMP workshops in 32 of Oregon's 36 counties.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality of life outcomes for people with diabetes.



## Program Planning, Start-Up, and Growth

Oregon's first CDSMP leadership training was held in 2001 with funding from the Oregon Diabetes Program. The diabetes program continued to support leadership training and workshops through 2005, when the Oregon Department of Human Services (DHS), Aging and People with Disabilities Division, and the Oregon Health Authority (OHA), Public Health Division, began to jointly support Living Well. In 2009, Oregon's health reform legislation (House Bill 2009) initiated several systems changes that facilitated Living Well implementation, including coordination of multiple government health entities under a state health authority. House Bill 2009 also included recommendations for reimbursing chronic disease self-management for Medicare recipients, public employees, and people covered by the state's Medicaid plan. When systematic data collection for the program began in 2005, 6 Living Well workshops had been delivered. In 2011, 192 CDSMP workshops were delivered.

### Program Timeline:

2001	2005	2009	2011
<ul style="list-style-type: none"> <li>CDSMP leadership training and workshops supported by the Oregon Diabetes Program (2001–2005)</li> </ul>	<ul style="list-style-type: none"> <li>Living Well jointly supported by DHS and OHA</li> <li>Systematic data collection initiated</li> <li>6 CDSMP workshops delivered</li> </ul>	<ul style="list-style-type: none"> <li>Health reform legislation is a catalyst for CDSMP reimbursement</li> <li>134 CDSMP workshops delivered</li> </ul>	<ul style="list-style-type: none"> <li>192 CDSMP workshops delivered</li> </ul>

**Key Stakeholders:** Oregon Department of Human Services, Aging and People with Disabilities Division; the Oregon Health Authority, Public Health Division; approximately 27 Stanford-licensed host organizations—including Area Agencies on Aging, local health departments, and community-based organizations—and their local delivery sites.

**Target Population:** Living Well targeted people with one or more chronic conditions and their supporters. *Tomando Control de su Salud*, the culturally adapted Spanish language version of CDSMP, targeted the Spanish-speaking segment of this population.



## Implementation

### Key Program Components

- Direct funding for program delivery was not provided by the state; instead, the state fostered coordination and partnership among local public health authorities as part of a broader OHA-funded Healthy Communities grant program to address chronic disease. State funding covered technical assistance, leader training, annual meetings, and other supports. Local communities provided programs through organizational support and staffing, local and federal grants, hospital funding, and United Way funding.
- Living Well followed the Stanford model by offering a 2.5-hour workshop once a week for 6 weeks in community settings, such as senior centers, churches, libraries, and hospitals. People with different chronic health problems attend together. Workshops were facilitated by two trained leaders, one or both of whom were non-health professionals with a chronic disease themselves.
- Program participants were recruited by local program delivery partners, including community-based organizations, local public health authorities, aging services providers, clinics, hospitals, and insurers. Common sources of information and referral for participants included word of mouth, referral by health care providers, referral by community or faith-based organizations, and earned media.

### Required Resources

- **Staff:** Statewide coordinator (1.0 FTE), sustainability lead (0.3 FTE), and administrative specialist (0.5 FTE); local/regional coordinators, master (leader) trainers, program leaders (mix of peers, volunteers, and professionals)
- **Funding:** Overall cost for CDSMP workshops was approximately \$375 per participant, including leader training, licensure, marketing, and delivery. Local programs must be licensed by Stanford University, with a minimum license fee of \$500 for 3 years.
- **Other:** The State Health Authority hosted a toll-free program information and referral line and a Website that enabled users to find workshops. Program leaders attended 4-day training sessions; master trainers attended a 4.5-day training. Classroom space was required for up to 18 participants. Required materials included leader manuals and basic classroom supplies, such as flip-charts.

### Implementation Challenges

- Sustainability was the major challenge CDSMP state-level staff are working to address, particularly in how to move forward from grant funding to a more sustainable, long-term funding stream. This challenge was initially addressed by phasing out direct funding of program delivery and coordinating funds at the state level to provide CDSMP technical assistance, leader training, annual meetings, and related auxiliary supports. Efforts were underway to diversify funding sources to include reimbursement through public and private insurers and to embed the program into local health reform, including patient-centered medical home standards.

## Implementation and Maintenance Tips

The Oregon DPCP offered several tips for successful implementation and maintenance of a state-wide CDSMP initiative:

- **Promote local ownership.** They recommended promoting local ownership, being available for guidance, and creating an atmosphere where local programs become independent of the DPCP.
- **Assure quality.** Monitoring quality of services and fidelity to the intervention model was important. This ensured that participants are receiving a quality product.
- **Plan for sustainability.** It was crucial to think about sustainability early on. For example, they strived for a systems approach rather than a payment for program delivery.



## Evaluation Approach

- Current evaluation efforts focused on a qualitative assessment of the Oregon model for CDSMP delivery and monitoring fidelity to the Stanford model.
- Living Well developed fidelity monitoring tools in 2009 and decided that, following certification, trained leaders would be observed by master trainers at least annually to assess fidelity to the Stanford model.
- Oregon Health Authority collected evaluation data for Living Well and *Tomando Control de su Salud*, including types of referrals, number of workshops and participants, participant demographics, self-reported chronic conditions and risk factors, and number of trained leaders.

## Evaluation Lessons Learned

- Rather than spend limited state-level funding on collecting data on outcomes among CDSMP participants, the Oregon Health Authority chose to focus evaluation resources on process evaluation and a projected impact assessment. In 2010, the Oregon Health Authority and Department of Human Services worked with Oregon State University to develop some estimates of the impact of Living Well and *Tomando Control de su Salud* by using Stanford's original research findings and participant reach to date. Findings from this report have proven very useful in building a case for the program among potential funders, and the impact assessment was far less costly and time consuming to conduct than a rigorous state-level outcome evaluation.
- Locally, several health systems and the state Department of Corrections were incorporating referrals and documentation of Living Well and *Tomando Control de su Salud* attendance in their electronic health record system, which will provide important information about the impact of these programs on health care utilization.

### Key Program Achievements

#### Process Outcomes

- 7,597 participants in 745 CDSMP and DSMP workshops between January 2006 and December 2011
- CDSMP workshops offered in 32 of Oregon's 36 counties between January 2006 and December 2011
- In 2011, 64% of workshops conducted were observed for fidelity or led by leaders who had been observed during the previous year

#### Systems Change

- Federally Qualified Health Centers developed systematic referrals of patients to Living Well through electronic health technology



### Related References, Resources, and Tools

- Oregon Living Well Website: [www.healthoregon.org/livingwell](http://www.healthoregon.org/livingwell)

# VIRGINIA CHRONIC DISEASE AND DIABETES SELF-MANAGEMENT PROGRAMS



The Stanford-licensed Chronic Disease Self-Management Program (CDSMP) and Diabetes Self-Management Program (DSMP) were jointly supported by the Virginia Department of Health (VDH) and the Virginia Department for the Aging (VDA). Currently, 23 partnering organizations delivered CDSMP and DSMP workshops, including Area Agencies on Aging, hospital systems, and community-based organizations.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality of life outcomes for people with diabetes.



## Program Planning, Start-Up, and Growth

Virginia's CDSMP originated in the VDH Arthritis Program in 2005. By 2008, staff from other VDH chronic disease programs, including the Diabetes Prevention and Control Program (DPCP), were trained as CDSMP master trainers. Beginning in 2010, some VDH staff members were trained as DSMP master trainers. With funding awarded through the national Administration on Aging, the Virginia Department for the Aging began providing leader and master training in CDSMP in 2010. Since the development of Virginia's Chronic Disease and Diabetes Self-Management Programs, approximately 2,000 participants have completed CDSMP workshops, and 604 Virginians have completed DSMP workshops. The Virginia DPCP then collaborated with VDH's WISEWOMAN program to promote CDSMP and DSMP in areas where the program was offered; this collaborative effort had the potential to reach up to 1,300 low-income women a year.

### Program Timeline:

2005	2008	2010	2012
<ul style="list-style-type: none"> <li>Arthritis program initiated by VDH's CDSMP</li> </ul>	<ul style="list-style-type: none"> <li>Six staff from multiple VDH chronic disease programs trained as CDSMP master trainers</li> </ul>	<ul style="list-style-type: none"> <li>Three VDH staff trained as DSMP master trainers</li> <li>VDA partnered with VDH to support the CDSMP</li> <li>DPCP collaborated with WISEWOMAN to promote CDSMP and DSMP</li> </ul>	<ul style="list-style-type: none"> <li>200 CDSMP and 63 DSMP workshops delivered to date</li> </ul>

**Key Stakeholders:** Virginia Department of Health; Virginia Department for the Aging; 23 local workshop delivery organizations, including Area Agencies on Aging, three hospital systems and community-based organizations or health coalitions; and VDH's WISEWOMAN program.

**Target Population:** Virginia's CDSMP targeted adults with one or more chronic conditions and their caregivers. The DSMP targeted adults with diabetes. Low-income women with chronic conditions were targeted through collaboration with Virginia's WISEWOMAN program.





## Implementation

### Key Program Components

- Virginia's Chronic Disease Self-Management Program (CDSMP) and Diabetes Self-Management Program (DSMP) were free 2.5-hour workshops given once a week for 6 weeks. These workshops taught practical skills for living a healthy life. The DSMP was specifically for people with diabetes. Both workshops followed the Stanford model and were facilitated by two trained leaders, one or both of whom were peer leaders with diabetes or other chronic diseases.
- The Virginia DPCP sponsored and provided resources for CDSMP trainings and combined CDSMP and DSMP trainings for workshop leaders. The DPCP also collaborated with Virginia's WISEWOMAN program to promote and support implementation of CDSMP and DSMP in WISEWOMAN service areas.
- There was no formal referral process for Virginia's Chronic Disease and Diabetes Self-Management Programs. Participants were recruited by local workshop providers, including community-based organizations and Area Agencies on Aging. Recruitment efforts included radio advertising and dissemination of flyers throughout communities where workshops were delivered. The VDA promoted the program in senior centers and planned to collaborate with the Department of Medical Assistance Services to send recruitment postcards to Medicaid beneficiaries who lived in communities where programs were offered.

### Required Resources

- **Staff:** A state-level CDSMP/DSMP coordinator (0.5 FTE) and data analyst (0.3 FTE); master trainers and program leaders (mix of peers and health professionals).
- **Funding:** CDSMP/DSMP funding has ranged from \$42,000 to \$115,000 a year based on the availability of VDH funds; this included costs for licensure, training for workshop leaders, and workshop materials. The cost of providing one training for master trainers was approximately \$30,000.
- **Other:** VDH and VDA Web pages for CDSMP/DSMP; workshop materials, including books and CDs.

### Implementation Challenges

- The time commitment required for training was the major challenge for statewide implementation of chronic disease management programs. The DPCP noted that "CDSMP/DSMP is a significant time commitment—it takes 4–5 days to get trained." Efforts to address this challenge included promoting the benefits of CDSMP and DSMP for people with chronic conditions and minimizing costs for workshop delivery partners.
- Other reported implementation challenges included promoting DSMP in a way that was perceived as complementary to, rather than competitive, with diabetes self-management education/training (DSME/T) programs offered in hospitals throughout the state and developing new avenues for marketing the program, such as through social media.

## Implementation and Maintenance Tips

The Virginia DPCP offered several tips for successful implementation and maintenance of a statewide CDSMP initiative:

- **Collaborate to avoid “intervention fatigue.”** As one DPCP staffer said, “We [chronic disease programs] are all competing for the same people’s time. We can unify around [CDSMP] to reduce intervention fatigue.”
- **Share costs.** Since the cost for one training was quite large (\$30,000), sharing the cost among several programs made a difference.
- **Partner with existing programs to address disparities.** WISEWOMAN served 1,300 low-income uninsured women every year.



## Evaluation Approach

- Current evaluation efforts focused on assessing changes in participants’ disease management knowledge, attitudes, and behaviors through Stanford-developed pre- and post-workshop surveys.
- Site audits were also periodically conducted to assess fidelity to the Stanford model.

## Evaluation Lessons Learned

- Data entry for pre- and post-assessments was time consuming. The DPCP recommended that programs should explore ways to eliminate manual data entry.
- As the program grew, partners needed to receive training on licensing details as outlined by Stanford.

### Key Program Achievements

#### Process Outcomes

- 2,602 participants in 263 CDSMP and DSMP workshops as of May 2012
- Data summary on reported changes in knowledge, attitudes, or behaviors scheduled for fall 2012 publication



## Related References, Resources, and Tools

- Virginia Department for the Aging CDSMP/DSMP Website:  
<http://www.vda.virginia.gov/cdsmp-participant.asp>



The Alaska Diabetes Prevention and Control Program (AK DPCP) worked with multiple partner organizations to improve chronic disease self-management among vulnerable populations with chronic conditions, through their implementation of Living Well Alaska (LWAK), a program modeled after the Stanford Chronic Disease Self-Management Program (CDSMP).

Core Diabetes Intervention #0	Core Diabetes Strategy 0.0
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality of life outcomes for people with diabetes.



## Program Planning, Start-Up, and Growth

The DPCP implemented LWAK to help institutionalize chronic disease self-management programming in the state. In 2006, the DPCP held the first master training with Stanford personnel and purchased a state license required to provide CDSMP workshops. Since then, the DPCP has partnered with several funding and delivery organizations to expand the program. Since 2006, there have been 142 LWAK workshops, 28 of which were located in communities with total populations of less than 2,000 persons and in communities not connected to the Alaska road system. LWAK was offered at more than 50 locations, including community health centers, tribal health clinics, senior centers, veterans clinics, and faith communities. A Spanish language version of the CDSMP, *Tomando Control de su Salud*, was offered at the community health center in Anchorage, the city with the largest Hispanic population in the state. In the future, the DPCP hopes to expand distance delivery of workshops to remote areas of Alaska. The DPCP conducted a pilot project for distance delivery of CDSMP. They collaborated with the Alaska Native Tribal Health System and planned a distance delivery pilot project by which they could lead CDSMP workshops from Anchorage for participants living in remote communities.

### Program Timeline:

2006	2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>First master training</li> </ul>	<ul style="list-style-type: none"> <li>Partnership with community health centers</li> </ul>	<ul style="list-style-type: none"> <li>Partnerships with the Alaska Parish Nurse Resource Center, Cooperative Extension Services, and the Alaska Native Tribal Health System</li> </ul>	<ul style="list-style-type: none"> <li>Second master training</li> <li>T-trainer training</li> <li>Partnership with local Veterans Affairs clinics</li> </ul>	<ul style="list-style-type: none"> <li>Partnerships with senior centers</li> <li>Partnership with five tribal health clinics</li> </ul>	<ul style="list-style-type: none"> <li>First CDSMP distance delivery workshops</li> <li>Partnership with two tribal health clinics as remote pilot sites</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of 1-year follow-up of clinical outcomes of CDSMP participants</li> <li>Data collected for analysis of Medicaid claims of CDSMP workshop participants</li> </ul>

**Key Stakeholders:** Alaska Parish Nurse Resource Center, University of Alaska Cooperative Extension Services, Anchorage Neighborhood Health Center, Anchorage VA Healthcare Services, Kenaitze Indian Tribe, Southcentral Foundation, Anchorage Senior Center, Palmer Senior Center.

**Target Population:** Alaska adults with chronic conditions in particular seniors, Alaska Natives, and low-income populations.



## Implementation

### Key Program Components

- The DPCP recruited partner sites that can reach the target populations.
- The DPCP focused on leader trainings because maintaining Master status is not feasible in smaller communities.
- The DPCP recruited course leaders to teach in culturally relevant settings (e.g., for Spanish-speaking older adults).

### Required Resources

- **Staff:** .5 FTE coordinator; .25 FTE programmer/analyst.
- **Funding:** LWAK received funds from CDC, the Administration on Aging, and the National Association of Chronic Disease Directors. It is estimated that LWAK spends about \$200,000 per year for coordination, licensing, training, fidelity monitoring, and evaluation. The DPCP provided competitive implementation grants to partner organizations, including the Anchorage Neighborhood Health Center (\$12,500 per year); the Parish Nurse Resource Center (\$20,000 per year); and the Cooperative Extension Services (\$30,000 per year). In cooperation with the AK Unit on Aging using Administration on Aging funds, one-time grants of \$10,000 were made available to three senior centers.

### Implementation Challenges

- There was an absence of area units on aging and organizational oversight among agencies serving both seniors and tribal elders. Because there were no mid-level umbrella organizations to assist with recruitment of trainers or promotion of the program, the AK DPCP acted as a direct partner to implementers.
- The DPCP initially thought the scripted Stanford model would be easy to implement in multiple settings; however, in small rural communities, implementation proved to be a challenge. After recruiting 30 persons from small rural and remote communities and training them as workshop course leaders, only 9 persons ever fulfilled the expectation to teach at least 2 classes. In a post-leader training survey of rural leaders, many indicated that they had intended to lead a workshop but experienced barriers that prohibited them from following through, including job changes, lack of administrative support, absence of a co-leader, and challenges with recruiting participants.

## Implementation and Maintenance Tips

The AK DPCP offered several tips for successful implementation and maintenance of CDSMP in the community:

- **Partner selectively.** Choosing organizations with congruent goals that will remain committed to the missions, as well as organizations that already have established infrastructures (e.g., electronic mailing list, a sense of unity in the organization) was important. The DPCP recommended working with agencies that have a focus on target populations and a connection to health.
- **Recruit lay leaders who represent the target population.** For example, older, Spanish-speaking lay leaders have been well received in community health center workshops.
- **Broaden focus to facilitate sustainability.** The DPCP focused on the application of CDSMP for chronic disease, not just diabetes. This provided a wider range of funding opportunities and increased the reach of self-management programs.
- **Consider distance delivery of CDSMP for rural or remote populations.** Because distance delivery of CDSMP was not part of the Stanford-approved model, the DPCP implemented a pilot project to determine its feasibility. The pilot involved two tribal health agencies: one served Alaska Natives living in seven communities spanning a distance of 720 miles, and the other served Alaska Natives living in eight communities spanning a distance of 1,260 miles. To access these remote communities concurrently, the DPCP used telemedicine technology. This involved communication systems that allowed real-time, synchronous visual and auditory interaction among multiple sites simultaneously.



## Evaluation Approach

The DPCP collected process data, including fidelity to the Stanford model, leader retention, participant completion rates, referral system partners, number of course leaders trained, number of active course leaders, and number of participants in the 6-week workshops. In addition, the DPCP collected pre- and post-test workshop survey data from participants, including self-confidence to manage their chronic condition, general health, number of sick days where they are unable to perform activities of daily living, and general demographics.

The DPCP partnered with the local community health center to obtain and analyze clinical outcomes from their patients. To date, the DPCP has collected gender, age, diagnosis, weight, BMI, A1C, LDL, and blood pressure data at baseline and at 3-month, 6-month, and 12-month follow-ups. The DPCP assessed these measures in three groups: the CDSMP cases ( $n = 65$ ); the DSMP/DME group ( $n = 65$ ); and a comparison group ( $n = 100$ ) matched by age, gender, and diagnosis. Statistical analysis plans include comparisons across cohorts on changes in clinical outcome measures. Preliminary data analysis showed significant differences between the Self-Management cohorts and the control group in blood pressure, BMI, and A1C.

The AK DPCP also evaluated the pilot distance delivery program. Feedback was collected from course leaders and a subset of participants. The leaders reported that the participants were engaged in the workshop and in completing their action plans.

### Key Program Achievements\*

#### Process Outcomes

- 52 organizations provide CDSMP
- 291 course leaders trained
- 47 Master trainers trained
- 2 T-trainers\*\* trained
- 909 participants
- 667 completers (73%)

#### Health Outcomes

Changes in measures of CDSMP cohort (n = 65) at pre-workshop and 12 months

- Mean A1C improved from 8.2 to 7.6%
- Mean BMI improved from 34.2 to 33.9
- Mean BP  $\geq$  130/90 mmHg improved from 48% to 36%
- Mean LDL improved from 137 to 109 mg/dL

#### Pilot Distance Delivery Program Evaluation Process Outcomes

- Workshop ranked 10 out of 10 by participants
- Confidence to live a healthy life with a chronic condition increased from 7.8 to 8.6

\* Data current as of May 2012

\*\* T-trainers train master trainers. Master trainers train leaders and lead classes. Course leaders lead classes.



### Related References, Resources, and Tools

- <http://patienteducation.stanford.edu/>
- <http://www.hss.state.ak.us/dph/chronic/pubs/assets/ChroniclesV4-1.pdf>
- <http://www.hss.state.ak.us/dph/chronic/smp/default.htm>

# MICHIGAN DIABETES SELF-MANAGEMENT CERTIFICATION PROGRAM



The Michigan Diabetes Self-Management Certification Program facilitated the development of diabetes self-management education/training (DSME/T) programs and coordinated the certification of DSME/T programs statewide.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes self-management education/training (DSME/T) programs that meet national standards and demonstrate improved behavioral and/or clinical outcomes for people with diabetes (e.g., ADA recognized or AADE accredited DSME/T programs).



## Program Planning, Start-Up, and Growth

In 1985, Michigan became the first state to adopt diabetes standards and provide Medicaid reimbursement for DSME/T programs. Since then, the Michigan Diabetes Prevention and Control Program (DPCP) staff have certified 90 hospital-based DSME/T programs. Certification was based on national standards and reflects quality measures. The DPCP program coordinator also worked with other hospitals and agencies to facilitate development of DSME/T programs by providing technical assistance and providing a Microsoft Access database for tracking participants and their follow-up.

### Program Timeline:

1985	1986	2000	2011	2012
<ul style="list-style-type: none"> <li>Diabetes standards adopted</li> <li>Medicaid reimbursement for DSME/T programs started</li> </ul>	<ul style="list-style-type: none"> <li>90 hospital-based DSME/T programs certified (90th certified in November 2011)</li> </ul>			

**Key Stakeholders:** Michigan Medicaid, Diabetes Sustainability Group of DSME Coordinators, Michigan Chapter of the American Association of Diabetes Educators, Diabetes Partners in Action Coalition (DPAC).

**Target Population:** Persons with diabetes, prediabetes, or gestational diabetes who are newly diagnosed or have had a change in their diabetes management. The focus of the Certification Program tended to be on Medicaid recipients with diabetes for reimbursement purposes, but DSME/T programs were open to anyone living with diabetes or prediabetes.



## Implementation

### Key Program Components

- The program coordinator worked with hospitals or agencies interested in developing a DSME/T program. This included providing information on national standards, available databases, and technical support.
- Most programs had national recognition (American Diabetes Association) or accreditation (American Association of Diabetes Educators) for Medicare reimbursement purposes.
- The Michigan certification process included a mandatory, initial DPCP site visit. In addition, the DPCP conducted random site visits to 10% of DSME/T programs each year to ensure that they are meeting program standards, as outlined in the *Michigan Department of Community Health Diabetes Self-Management Education Program Standards*.
- DSME/T program coordinators (or designees) attended an annual meeting to discuss changes to DSME/T standards, programming, and program operations.

### Required Resources

- **Staff:** 1.0 FTE program coordinator and 1.0 FTE support staff.
- **Funding:** Medicaid reimbursement covered half of the total program cost; the remaining costs were covered by state general funds. The approximate annual budget was \$93,900.
- **Other:** Costs for certification visit, travel to sites for necessary technical support, and costs to host annual meetings.

### Implementation Challenges

- Although the DPCP monitored quality measures for the programs it certifies, there were other organizations or businesses that provide diabetes education, and in some cases received reimbursement, without meeting national standards. Some potential DSME/T sites opted for the more affordable option with fewer quality checks and monitoring.
- The Michigan Medicaid policy limited certification to hospital- and health department-based programs.

### Implementation and Maintenance Tips

Michigan offered several tips for successful implementation and maintenance of a certified DSME/T program:

- **Coordinate with AADE.** The Michigan chapter of the American Association of Diabetes Educators (AADE) provided information on the DSME Certification Program to over 300 AADE members in Michigan. The certification program coordinator acted as the liaison to AADE and also serves on the coordinating body.
- **Market the program.** The DPCP promoted certified DSME/T programs and participant recruitment by making available materials that can be posted on Websites or included in newsletters to better advertise the program.



- **Use the annual meeting.** The annual meeting was a key strategy for sustaining DSME/T programs by serving as a forum for disseminating new information to sites, particularly updates on national standards and reimbursement policy changes.
- **Maintain oversight.** Maintaining state-level oversight of the certification process was important for assuring quality.



## Evaluation Approach

The hospital-based sites reported to the DPCP annually using a standardized statistical report form created by the DPCP statistician. Aggregate data were reported on the number of referrals, enrollees, completions, gender, age, type of diabetes and race. Hospital-based sites also complete an annual report describing how their program operations meet each of ten national standards and seven AADE behavior change measures. Additionally, all programs selected a program outcome to track and report on annually to the DPCP (e.g., A1C levels, foot exams, satisfaction).

## Evaluation Lessons Learned

- DSME/T was an evidence-based intervention with proven health benefits. Therefore, when resources were limited, programs considered focusing evaluation of quality and fidelity to DSME/T standards. Evaluation based solely on individual patient outcomes was resource intensive.

### Key Program Achievements

#### Process Outcomes

- 44,053 referrals
- 32,342 DSME/T enrollees
- 23,918 DSME/T completions



## Related References, Resources, and Tools

- Michigan Department of Community Health Diabetes Self-Management Education Program: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_2980-13791—,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2980-13791—,00.html)

# TEXAS COMMUNITY DIABETES PROJECTS



Texas Community Diabetes Projects (CDPs) were implemented by the Texas Diabetes Prevention and Control Program (DPCP) through contracts with local organizations offering evidenced-based diabetes interventions in medically underserved regions of Texas. Sixteen projects involving Federally Qualified Health Centers (FQHCs), local health departments and other nonprofit organizations offered diabetes self-management classes, worked with local coalitions, participated in state tobacco control efforts - assist with chronic disease surveillance activities, trained community health workers, worked with local media, and field tested diabetes education materials.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes self-management education/training (DSME/T) programs that meet national standards and demonstrate improved behavioral and/or clinical outcomes for people with diabetes (e.g., ADA recognized or AADE accredited DSME/T programs);



## Program Planning, Start-Up, and Growth

In 1983, the Texas Legislature established the Texas Diabetes Council (TDC) to develop a state plan addressing the needs of Texans with diabetes. The plan supported development of accessible, high-quality diabetes treatment services and programs for patients with diabetes to improve glucose control. Charged with implementing the plan, the Texas DPCP started CDPs to develop culturally appropriate intervention models for the state's diverse populations. Common objectives for all project participants included improved overall wellness, increased physical activity, weight and blood pressure control, and smoking cessation for people with or at risk for diabetes. In 2008, the Texas DPCP enlisted the support of the University of Texas to provide technical assistance for physical and nutrition interventions, project evaluation, and development of a standardized evaluation tool for collecting patient outcome data across CDPs.

### Program Timeline:

2006	2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>Funding cycle initiated for 12 state-funded projects</li> <li>Online Program Management and Tracking System initiated</li> </ul>		<ul style="list-style-type: none"> <li>Contract with University of Texas established to provide technical assistance and overall project evaluation support</li> </ul>	<ul style="list-style-type: none"> <li>Training offered on program sustainability as funding cycle draws to a close</li> </ul>	<ul style="list-style-type: none"> <li>University of Texas pilot tested a standardized evaluation tool to collect data on participant outcomes</li> </ul>	<ul style="list-style-type: none"> <li>New funding cycle began</li> <li>New CDPs selected based on ability to collect standardized data</li> <li>Standardized data collection tool introduced for all projects</li> </ul>	<ul style="list-style-type: none"> <li>Online training module developed for Program Management and Tracking System to facilitate data collection</li> <li>CDPs began collecting participant outcome data</li> </ul>

**Key Stakeholders:** Local health departments, community clinics and community-based grassroots organizations, and FQHCs that served as sites for the community programs; and the TDC.

**Target Population:** The DPCP used regional and county-level data to assess burden and target areas of the state with high mortality rates and higher disease burden for CDP implementation. These medically underserved regions in both rural and urban settings were likely to include racial and ethnic minorities who tended to have disproportionate rates of diabetes and limited access to health services.



## Implementation

### Key Program Components

#### Material Promotion

- CDPs promoted the TDC's Diabetes Tool Kit for professionals (5th edition), developed by the DPCP, which features self-management education training content based on the American Diabetes Association (ADA) National Standards for Diabetes Education; and the TDC's *Minimum Standards for Diabetes Care in Texas*, which included evidence-based treatment algorithms.
- CDPs used the English and Spanish versions of the CDC-recognized DSME/T curriculum, Diabetes Empowerment Education Program (DEEP), produced by the University of Chicago.

#### Service Provided

- The DPCP required CDPs to focus on two policy, system, and environmental changes per year such as strengthening referral systems, farm-to-work programs, menu improvements at restaurants to provide healthier menu choices, technical support of local smoking ordinances, building trails, and providing ongoing physical activity events to promote safe access to physical activity.
- CDPs provided services where people already gather, such as churches and migrant health program settings.
- Some successful program participants, particularly those who have succeeded in losing weight, were recruited to serve as spokespersons to promote the program in the community and assist in recruiting new participants.
- Some CDPs held press conferences to showcase these champions and highlight special program features, such as test kitchens.
- The DPCP provided training, technical assistance and evaluation support to achieve outcomes related to participant wellness, physical activity, weight and blood pressure control, and smoking cessation.
- To reach diverse populations disproportionately affected by Diabetes, CDPs employed culturally appropriate strategies such as home visits by community health workers (CHWs) or *promotoras*. These efforts were often combined with health communication campaigns that included radio and TV ads and weekly interviews with CHWs or *promotoras* to reach target populations.
- The DPCP held quarterly peer-to-peer meetings with grantees that featured success stories/ presentations and other activities to facilitate information sharing and collaborative learning.
- The DPCP provided technical assistance by assigning program specialists to monitor activities, review quarterly reports, and conduct site visits to make recommendations for improvement.

## Required Resources

- **Staff:** The DPCP provided three program specialists to monitor activities, provide TA and organize trainings, and manage contracts. CDPs each dedicated 1.0 FTE for the project management and implementation, although this does not need to be supported through DPCP funds.
- **Funding:** \$1,359,798 (FY2012): CDPs and evaluation contractor
- **Other:** Diabetes Tool Kit, physical activity tools for participants such as stretch bands and pedometers, and additional curricula and support staff supplied by partners such as Texas AgriLife Extension (Texas A&M University) and the University of Texas at Austin Department of Kinesiology.

## Implementation Challenges

The Texas DPCP faced three major challenges in implementing CDPs:

- Ability to meet standards for fiscal accountability by grantee organizations. Some grantees struggled with adequate accounting systems.
- Availability of funds to fully implement projects
- A variety of contractor types—such as public health agencies, nonprofit and faith-based organizations—made it difficult to standardize efforts and collect comparable data.

## Implementation and Maintenance Tips

The program offered the following tip for successful implementation and maintenance of CDPs:

- **Combine efforts.** Combining efforts and resources with other funded initiatives that had a similar charge, such as a kidney disease awareness campaign, was a useful strategy to conduct media outreach and improve screening.



## Evaluation Approach

The Texas DPCP evaluated CDP sites by assessing clinical outcomes (A1C, triglycerides, cholesterol, blood pressure, tobacco cessation referrals, waist circumference, BMI, and weight loss at 6 months and 1 year) and monitoring broader policy and environmental change. The CDPs were required to identify program-specific impact objectives and report on these annually. Some CDP sites, such as FQHCs, had data readily available to assess changes in clinical outcomes, while other community-based sites did not have access to clinical outcome data.

The DPCP partnered with an academic institution to evaluate program outcomes and impact in select CDP sites and to measure processes to understand how best to disseminate this intervention throughout Texas. To that end, one CDP established cohorts to measure patient knowledge, attitudes, and intermediate changes as well as to capture clinical outcomes.

## Evaluation Lessons Learned

- The DPCP added standardized evaluation measures and tools to CDP contracts so that the same data were collected across the state.
- The DPCP recommended dedicating program funds to support evaluation activities.

### Key Program Achievements

#### Process Outcomes

- From October 2011 through March 2012, 25,158 encounters (15% African American, 17% White, 2% Asian, 60% Hispanic, and 5% other race/ethnicity). Unduplicated attendees totaled 1,976



### Related References, Resources, and Tools

- The Texas Diabetes Council Website: <http://www.dshs.state.tx.us/diabetes/tdc.shtm>
- Current listing of Texas Community Diabetes Projects: <http://www.dshs.state.tx.us/diabetes/tdcdaecs.shtm>
- Texas Diabetes Tool Kit: <http://www.tdctoolkit.org/>
- “Do Well, Be Well with Diabetes” curriculum (also used by some CDPs): [http://www.nifa.usda.gov/nea/food/pdfs/health\\_texas\\_diabetes.pdf](http://www.nifa.usda.gov/nea/food/pdfs/health_texas_diabetes.pdf)

# NORTH CAROLINA DIABETES EDUCATION RECOGNITION PROGRAM



The North Carolina Diabetes Education Recognition Program (NC-DERP) was established to increase the number of American Diabetes Association (ADA)–recognized programs in North Carolina. Since 2007, the North Carolina Division of Public Health (NC DPH) achieved ADA recognition to provide diabetes self-management education/training (DSME/T). NC DPH key partners included local health departments, which served as “multi-sites” under this umbrella recognition. ADA-recognized programs can bill Medicaid, Medicare, and private insurers for self-management training.

Core Diabetes Intervention #0	Core Diabetes Strategy 0.0
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes self-management education/training (DSME/T) programs that meet national standards and demonstrate improved behavioral and/or clinical outcomes for people with diabetes (e.g., ADA recognized or AADE accredited DSME/T programs).



## Program Planning, Start-Up, and Growth

In 2005, a county health department director approached the NC DPH chronic disease director with an idea for supporting sustainable diabetes self-management education: obtaining umbrella ADA recognition at the state level so that local sites could seek reimbursement. Target settings for local sites were local health departments. NC DPH initially piloted NC-DERP with 4 local health departments and phased in additional cohorts through an annual request for applications (RFA). As of 2012, 38 local health departments, 7 expansion sites (e.g., church or YMCA), and 10 Federally Qualified Health Centers (FQHCs) delivered DSME/T services under the umbrella recognition.

### Program Timeline:\*

2005	2006	2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>Strategic planning</li> </ul>		<ul style="list-style-type: none"> <li>Umbrella recognition from ADA obtained</li> <li>NC-DERP piloted with 5 LHDs (Cohort I)</li> </ul>	<ul style="list-style-type: none"> <li>Cohort II: 12 LHDs and 9 expansion sites (including FQHCs)</li> </ul>	<ul style="list-style-type: none"> <li>Cohort III: 13 LHDs and 6 expansion sites</li> </ul>	<ul style="list-style-type: none"> <li>Cohort IV: 9 LHDs</li> </ul>	<ul style="list-style-type: none"> <li>Cohort V: 6 LHDs and 1 health district, which includes 7 sites</li> </ul>	<ul style="list-style-type: none"> <li>Cohort VI: 2 LHDs</li> </ul>

\*The timeline reflects only LHD additions, not deletions. The total number of sites is an accurate reflection of status as of May 2012.

**Key Stakeholders:** Local health departments, FQHCs, and other community sites that served as “multi-sites” under the umbrella recognition.

**Target Population:** NC-DERP targeted people with diabetes from several specific populations, including the uninsured and underinsured, rural African Americans, and Latina women with gestational diabetes.



## Implementation

### Key Program Components

- DSME/T sessions were held at local health departments and expansion sites. There was a \$100 fee for ADA recognition of secondary sites.
- NC-DERP had a formal referral process. All referrals were made by a provider, who filled out a standard form that patients used to follow-up with the DSME/T provider.
- NC-DERP used the American Association of Diabetes Educators (AADE) curriculum for DSME/T.
- Local health departments and FQHCs administered pre/post-A1C tests with their own funds and provided data on A1C and blood pressure to NC DPH.
- To date, each site managed its own marketing, which included newspaper advertisements, health department waiting room signs, or working with a Diabetes Advisory Council to produce and disseminate video success stories.

### Required Resources

- **Staff:** A full-time state-level coordinator and registered dietitians, registered nurses, pharmacists, or certified diabetes educators (CDEs) to deliver DSME/T at local sites and administrative support to schedule appointments, labs, etc.
- **Funding:** The program cost approximately \$20,000 to \$30,000 per year. State funds were used to cover expenses for ADA recognition; patient manuals from the International Diabetes Foundation; training for staff, including AADE curricula; and training for a billing expert who trained other billers in participating sites. NC-DERP funding came from federal and state sources (80% and 20%, respectively). Local sites paid for ADA recognition of secondary sites and staff to administer pre- and post-tests.
- **Other:** State database for tracking DSME/T participation and outcomes.

### Implementation Challenges

NC DPCP faced two major challenges at the state level in implementing NC-DERP: one was on the technical issues of submitting insurance claims, and the other was ideological. They also reported a third challenge at the local level:

- Training and staff time were needed to support billing and dispute reimbursement denials from Medicaid and Medicare.
- Some public health administrators believed that public health services should be provided for free and did not support applying a business model to public health practice, where public programs relied on reimbursement for their services.
- Local health department staff reported the following barriers to the provision of DSME/T: socioeconomic status of the county, lack of a dedicated funding stream for diabetes prevention and control, small size of the health department (in terms of budget and FTEs), and geographic location (e.g., operating in a rural area).

## Implementation and Maintenance Tips

The NC DPCP offered several tips for successful implementation and maintenance of a diabetes education recognition program:

- **Market the program.** The DPCP recommended providing marketing guidance to DSME/T sites and including someone with marketing expertise on the state program staff. Maintaining the right balance of insured and uninsured participants was key to sustaining DSME/T through reimbursement, so it would be prudent to have someone on staff who can help market program services to insured persons with diabetes.
- **Provide billing training.** Providing training and support for DSME/T billing was also important. Understanding Medicare billing was particularly critical for getting claims reimbursed. Several NC-DERP sites experienced repeated rejections of claims prior to payment being approved.
- **Maintain a balance of patients.** To enhance sustainability, the DPCP recommended maintaining a balance of insured participants and uninsured participants.



## Evaluation Approach

The NC DPH evaluated NC-DERP process and outcomes. The process evaluation focused on local health department satisfaction with NC DPH's administration of the program. To assess health outcomes, program sites took pre-/post-intervention measurements of participants' A1C and blood pressure. The sites used Chronicle, a tool created by ADA, to enter and manage patient data. The DPCP then reviewed reports generated by Chronicle to analyze the data. Patients reported behaviors such as medication management, foot checks, physical activity, and food consumption to educators. Participants also provided pre-/post-intervention reports of self-management behaviors and tobacco use. Site coordinators also collected information on referrals from WISEWOMAN and referrals to the Quitline.

## Evaluation Lessons Learned

- The DPCP felt assigning an evaluator to the project was important. Cleaning data was time consuming and a dedicated staff person was helpful.
- Evaluation data supported program improvement, including improvements in billing practices, such as how monies from reimbursement can be used to reach more participants in need.
- Program administrators also needed outcome data to garner support for program maintenance and expansion.



### Key Program Achievements

All patients who registered with the program saw improvements in A1C levels, but those who took a class saw larger improvements.

#### Process Outcomes

- 38 LHDs, 7 expansion sites, and 10 FQHCs have served over 4,500 patients
- Diabetes Care Outcomes
- 63% of patients check feet daily
- \$1.21 generated in medical care cost-avoidance benefits for every \$1 spent on this intervention (approximately 21% return on investment)

#### Health Outcomes

- 61% of patients have a post A1C of 7.0% or less
- Average BP went from 133/79 to 129/77 mmHg



### Related References, Resources, and Tools

- North Carolina Diabetes Recognition Website: <http://www.ncdiabetes.org/programs/ADA.aspx>
- Under the Umbrella: The North Carolina Diabetes Education Recognition Program Working with Local Health Departments to Increase Access to Care. *American Association of Diabetes Educators. Public Health Specialty Practice Group Newsletter*. October 2010.

# MAINE DIABETES SELF-MANAGEMENT EDUCATION PROGRAM



The Maine Diabetes Prevention and Control Program (DPCP) coordinated a statewide program providing program recognition, technical assistance, and leadership to 32 diabetes self-management education/training (DSME/T) program sites.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes self-management education/training (DSME/T) programs that meet national standards and demonstrate improved behavioral and/or clinical outcomes for people with diabetes (e.g., ADA recognized or AADE accredited DSME/T programs).



## Program Planning, Start-Up, and Growth

In 1978, the DPCP and partners established a diabetes self-management education (DSME/T) program, based on a needs assessment of diabetes resources statewide and an audit of medical records for diabetes-related hospitalizations. The DPCP created the Diabetes Mellitus Task Force to design an outpatient diabetes education and follow-up program, which became the Maine Model Ambulatory Diabetes Education and Follow-up (ADEF) Program. Simultaneously, they designed a reimbursement pilot study of the program. The pilot study for the program involved a partnership between the DPCP and Anthem Insurance, which served in the role of fiscal intermediary for attaining reimbursement by Medicare. The pilot study report documented a 32% reduction in hospitalizations and length of stay for a sample of 813 ADEF Program participants. Based on this report, Blue Cross Blue Shield of Maine (BCBSME) made reimbursement of the ADEF Program a policy for their regular members. The Maine Medicaid and Medicare intermediary continued their coverage of the program beyond the pilot period.

Since 1983, the DPCP has been responsible for ensuring quality and consistency of the ADEF Program at the participating education sites. In 2005, all ADEF Program sites were required to obtain recognition through the American Diabetes Association's Education Recognition Program to assure quality standards. In 2009, the AADE created the Diabetes Education Accreditation Program (DEAP), which added another option that helps DSME/T programs diversify their program delivery, maintain standards of care via the AADE recognition structure, and maintain reimbursement for providing education.

### Program Timeline:

1978	1980	1983	1996	2005	2009
<ul style="list-style-type: none"> <li>Needs assessment and audit of medical records for diabetes-related hospitalization conducted</li> <li>Diabetes Mellitus Task Force designed an outpatient DSME/T</li> </ul>	<ul style="list-style-type: none"> <li>Model ADEF Program at over 30 sites</li> </ul>	<ul style="list-style-type: none"> <li>DPCP report documented results of the reimbursement pilot</li> <li>BCBSME made reimbursement of the ADEF Program policy</li> </ul>	<ul style="list-style-type: none"> <li>State of Maine Legislature enacted a law mandating that all health insurance policies cover the ADEF Program</li> </ul>	<ul style="list-style-type: none"> <li>All ADEF and DSME/T Program sites required to obtain ADA recognition</li> </ul>	<ul style="list-style-type: none"> <li>AADE's Diabetes Education Accreditation Program (DEAP) became another option for program accreditation</li> </ul>

**Key Stakeholders:** Maine American Diabetes Association (MeADA), Diabetes Action Alliance of Maine, Maine Cardiovascular Health Program & Council, Office of Aging and Disability Services, and Healthy Maine Partnerships.

**Target Population:** All Maine residents with diabetes. In addition to English, materials were available in Spanish, French, Sudanese, and Somali; outreach efforts targeted Maine tribal populations.



## Implementation

### Key Program Components

- The DPCP provided program recognition, training and technical assistance, and leadership to 32 DSME/T sites (with additional satellite sites), including primary care practices, worksites, senior centers, group homes, community agencies, and social clubs. Most sites were connected to a health system or hospital.
- DSME/T was provided by certified diabetes educators (CDEs), nurses, and registered dietitians; lay educators were also involved in leading support groups.
- Patients were referred by their primary care providers. A directory of sites was available on the DPCP Website.
- Individual DSME/T programs were accredited through ADA and/or AADE and recognized by CMS as accredited DSMT programs. The DPCP also conducted a state recognition program and tracked maintenance of accreditation by other bodies.
- DSME/T was covered by Medicare, MaineCare, and private insurers operating in Maine.
- The DPCP diabetes coordinator provided technical assistance to the DSME/T program sites regarding program delivery, maintenance, and quality assurance. The DPCP also provided educational materials, including those of the National Diabetes Education Program, at no cost to programs. The DPCP diabetes comprehensive health planner also provided technical assistance on the DSME/T program data collection software.
- DPCP staff developed and continue to use the ADEF Program Manual, New Instructor Program, and ADEF Program Data Forms to assist in associated quality assurance activities DPCP staff, and the Maine ADA updated the curriculum as needed.
- DPCP staff, in collaboration with the MeADA, conducted an annual statewide diabetes conference for health professionals, and DPCP staff conducted regional meetings of diabetes educators. The DPCP also conducted a new instructor training program twice a year.

### Required Resources

- **Staff:** 4 DPCP staff (diabetes coordinator, diabetes comprehensive health planner, 2 DSME/T instructors) for a total of 2.25 FTE
- **Funding for Training:** \$5,000 was provided by the DPCP for the delivery of the New Instructor Program. All new DSME/T program coordinator or educators were required to participate in a 3-day course on how to deliver DSME/T Programs that met the 10 National Standards. Additional in-kind support was provided by MeADA.
- **Funding for Accreditation:** Accreditation costs were \$1,100 per site plus \$100 for each additional program site (ADA); and \$800 per site for up to 10 additional sites, \$800 for 11-20 sites, and \$1,200 over 20 sites where services were provided (AADE).

## Implementation Challenges

- The absence of local health departments in the state of Maine presented a challenge for marketing the DSME/T program. Members of local Healthy Maine Partnerships and DSME/T program lay educators promoted the program by disseminating information to communities and to primary care provider offices; however, DPCP staff felt that the programs needed to do more marketing.
- Some areas in Maine lacked a nearby program, particularly “down east” Maine located in Washington County. To start up a new program took a facility, a minimum of three staff, computers, and a fiscal intermediary, typically a hospital.
- Insurance coverage was limited and paid for only a certain number of follow-up visits. Phone follow-up was used to help participants continue with their goal-setting and health behavior changes.

## Implementation and Maintenance Tips

The program offered several tips for successful implementation and maintenance of a DSME/T program:

- **Create institutional knowledge about accreditation.** Staff having in-depth knowledge of accreditation processes were necessary for leadership and oversight.
- **Make training count.** The new instructor training provided by the DPCP twice each year counted toward the training necessary for the CDE credential.
- **Create satellite sites.** Challenges to starting a new DSME/T program were overcome by creating a satellite site to an already-existing and recognized program site.



## Evaluation Approach

Site-specific data were collected by the DPCP until 2007. Program data from 2001–2006 were used to evaluate changes in A1C, BMI, cholesterol, and health care utilization among program participants. Program sites continued to collect and report their own data for program recognition and for quality improvement, as required by the DPCP.

A comprehensive evaluation of the program is planned, including both patient and program variables. The evaluation will include assessment of problem-solving and decision-making skills and health behaviors among patients, in addition to an examination of intermediate health outcomes. Health care provider practice referrals, the capacity of practice sites to identify and prevent disease progression among patients, and systemic and program changes made in provider practices as a result of the intervention will all be evaluated. Patient data and interviews with DPCP and practice staff are planned.

### Key Program Achievements

#### Process Outcomes

- 2000 patients per year participating

#### Diabetes Care Outcomes

Data from 4,326 DSMT completers during period of 2001–2006:

- 78% of participants lowered A1C
- 61% lowered BMI
- 64% lowered total cholesterol

#### Health Outcomes

- 56% reduction in emergency room visits
- 68% reduction in diabetes-related hospitalizations



### Related References, Resources, and Tools

- <http://www.maine.gov/dhhs/bohdcfh/dcp/>

# TEXAS MEDICAID DIABETES SELF-MANAGEMENT TRAINING PILOT PROGRAM



In 2009, the Texas Legislature established the Medicaid Diabetes Self-Management Training Pilot Program to assess the cost-effectiveness and feasibility of diabetes self-management education/training (DSME/T) as a covered benefit under Medicaid. The program was launched in April 2011 and offered to fee-for-service (FFS) and primary care case management (PCCM) clients with a diagnosis of type 1, type 2, or gestational diabetes. To date, approximately 360 clients have been referred to the program.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.2
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support efforts to promote the sustainability of DSME/T or CDSM programs (e.g., Medicaid reimbursement for DSME/T or CDSM programs, bundled reimbursement, etc.).



## Program Planning, Start-Up, and Growth

In 1983, the Texas Legislature established the Texas Diabetes Council (TDC) to work with private and public health care organizations to reduce the health and economic burden of diabetes by promoting diabetes prevention and awareness throughout the state. The TDC, working closely with the Texas Diabetes Prevention and Control Program (DPCP), established goals in six priority areas, one of which is to advance public policy affecting diabetes. Over a period of 4 years and 2 legislative sessions, the TDC advocated for DSME/T as a covered benefit for the more than 286,000 Texans with diabetes who receive services under Texas Medicaid. The TDC educated legislators and worked on draft legislation that would provide DSME/T to all Texans with diabetes covered by Medicaid; however, the legislation did not pass. In the 2009 legislative session, the TDC and partners successfully advocated for the creation of a pilot program for FFS and PCCM patients (House Bill 1990). The Texas Health and Human Services Commission (HHSC) determined locations in the state for program implementation and the number of persons eligible to receive DSME/T through the pilot program. HHSC submitted a report to the Legislature regarding the data and outcomes that resulted from the pilot program in December 2012. The DPCP continued to work with statisticians at HHSC to collect program and cost data on Medicaid recipients with diabetes for the TDC, legislators, and advocates.

### Program Timeline:

2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>During the 80th Texas Legislature, the TDC supported SB1226 and its companion bill regarding coverage of DSME/T for all Texans with diabetes who receive Medicaid services</li> <li>Neither bill was passed</li> </ul>	<ul style="list-style-type: none"> <li>Planning for the 2009 session by the DPCP, the American Diabetes Association Government Affairs liaison, other advocates and HHSC leadership</li> </ul>	<ul style="list-style-type: none"> <li>During the 81st Texas Legislature, the TDC supported HB 1990, which established the Diabetes Self-Management Training Pilot Program</li> <li>The bill was passed with an expiration date of September 1, 2013</li> </ul>	<ul style="list-style-type: none"> <li>HHSC solicited vendor bids for the Medicaid Wellness Program</li> <li>McKesson Health Solutions, Inc. selected to administer the Wellness Program, including the DSME/T pilot program</li> </ul>	<ul style="list-style-type: none"> <li>Pilot program launched by McKesson in April</li> <li>By October, contracts existed with education sites located in Midland/Odessa, Tyler, and the Rio Grande Valley</li> <li>Approximately 360 clients were referred, and 50 were active and participating</li> </ul>	<ul style="list-style-type: none"> <li>Texas Legislature directed HHSC to expand Medicaid managed care. Much of the fee-for-service and PCCM population served by the DSME/T pilot transferred to a managed care plan, which is not eligible for the pilot</li> </ul>

**Key Stakeholders:** The Texas Diabetes Council, The Texas Medicaid Program, the Texas Health and Human Services Commission, McKesson Health Solutions, Inc., contracted provider sites.

**Target Population:** Eligible Medicaid clients with diabetes in areas of the state where contracted DSME/T services were available.



## Implementation

### Key Program Components

- A competitive bidding process was used to identify a contractor to manage the Medicaid Wellness Program and the pilot project. The contractor, McKesson Health Solutions, Inc., sub-contracted with recognized diabetes self-management education programs, where available, to provide DSME/T and collect data on outcomes measures.
- The program was offered to fee-for-service (FFS) and primary care case management (PCCM) clients with a diagnosis of type 1, type 2, or gestational diabetes. Children and adolescents diagnosed with diabetes were also eligible to participate.
- Clients were notified via phone or physical mail to contact McKesson if they were interested in this program. McKesson then performs an assessment and refers the patient to an education site nearby.
- The program provided training in accordance with the quality standards for DSME/T described by the Medicare Benefit Policy Manual. Patients were offered 10 hours of self-management training and 3 hours of nutritional counseling for the first year. After the first year, clients were offered 2 hours of self-management training and 2 hours of nutrition education.
- By October 2011, contracts existed with education sites located in Midland/Odessa, Tyler, and the Rio Grande Valley. Over 32 additional sites had been contacted to participate, and 8 were currently in contract negotiations. Approximately 360 clients had been referred, and 50 are currently actively participating, with 44 scheduled to be assessed for entrance into the program.
- The 2011 Texas Legislature directed HHSC to expand Medicaid managed care to achieve cost savings. Much of the fee-for-service and PCCM population served by the DSME/T pilot transferred to a managed care plan, which is not eligible for the pilot. The TDC turned attention to assessing managed care contracts in respect to DSME/T services offered. The final pilot report is expected in December 2012.

### Required Resources

- **Staff:** 2 FTEs served in the DPCP: the Program Director and Information Specialist serve as liaisons to advocates and HHSC in gathering necessary information for policy development and subsequent presentation to advocates and the Texas Legislature.
- **Funding:** Cost to implement program is not available at the time of this writing.

### Implementation Challenges

Texas faced several major challenges in implementing the pilot project:

- The project expired within a 2-year timeframe after implementation. Before services could be provided, contract negotiation was required with provider sites.

- It was difficult to enroll clients in the project because Medicaid eligibility changes every six months, so by the time Medicaid claims data are obtained, a client may no longer be eligible to participate in the project. The ability to show evaluation results is also affected by the lag time in claims data.
- Maintaining contact with some participating clients was challenging because they lack a permanent residence.
- During the final year of the pilot, HHSC was required to transfer much of the FFS and PCCM Medicaid population to managed care contracts as part of required cost-savings efforts. This effectively eliminated a large portion of the population served by the pilot, since the pilot does not apply to Medicaid Managed Care contracts. The Medicaid Wellness Program, through which the pilot was administered, serves only FFS and PCCM clients, whereas managed care organizations can determine their own method of DSME/T delivery.

## Implementation and Maintenance Tips

The program offered the following tips for supporting the development and implementation of policies for DSME/T reimbursement:

- **Collaborate with non-governmental partners.** Working through a non-governmental partner such as the TDC facilitated moving this effort forward as other DSME/T and state guidelines are developed.
- **Assess the political interest.** The DPCP also recommended determining the interest level of legislators in supporting a reimbursement bill by having discussions with key stakeholders like the Texas American Diabetes Association Government Affairs Office.
- **Manage time and expectations carefully.** Paying attention to conflicting timeframes and educating stakeholders regarding realistic expectations for evaluation results was an important strategy.



## Evaluation Approach

The providers' agencies were required to collect data on outcomes; however, no data will be available until the final report is released in December 2012.

## Evaluation Lessons Learned

- A large proportion of the Medicaid population was transient and hard to track.
- Medicaid eligibility changed every 6 months, making it difficult to retain consistent participants and measure the effects of the program.
- State health care reform was changing the delivery of services under Medicaid, making efforts to address older delivery systems (FFS and PCCM) obsolete within a very short timeframe.

### Key Program Achievements

- No data are currently available; however, a rigorous program evaluation is forthcoming.





## Related References, Resources, and Tools

- The Texas Diabetes Council: <http://www.dshs.state.tx.us/diabetes/tdc.shtm>
- Diabetes Self-Management Education (DSME/T) Establishing a DMSE Program for Adults with Type 2 Diabetes to improve Glycemic Control an Action Guide:  
[www.prevent.org/downloadStart.aspx?id=16](http://www.prevent.org/downloadStart.aspx?id=16)

# NEW YORK MEDICAID REIMBURSEMENT OF DSME/T SERVICES



As a means to control the skyrocketing costs of diabetes care in New York, the Diabetes Prevention and Control Program (DPCP) convened a task force in partnership with Medicaid to educate state legislators on the potential benefits of enhancing Medicaid's reimbursement policy for diabetes self-management education/training (DSME/T). The DPCP also conducted outreach to Certified Diabetes Educators (CDEs) in the state to educate them on how to submit reimbursement claims for their services. Reimbursable DSME/T may now be rendered in physician offices, hospital outpatient departments, and freestanding clinics.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.2
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Advocate for the implementation of policies that promote financial sustainability/reimbursement for DSME/T or CDSM programs (e.g., Medicaid reimbursement for DSME/T or CDSM programs, bundled reimbursement, etc.).



## Program Planning, Start-Up, and Growth

The movement to pass legislation on this issue began in 2007 with a call to action from the New York State (NYS) Department of Health to put patients first and increase access to DSME/T services through policy change. At the time, private insurance providers were already mandated to provide coverage for DSME/T, but Medicaid was not included in this mandate. In an effort to educate the Medicaid policy office staff about the importance of and need for DSME/T for Medicaid patients with diabetes, DPCP staff took them on a site visit to an accredited diabetes center to meet with CDEs and providers to hear firsthand about how DSME/T would improve lives and save Medicaid money. In 2009, the state legislature passed the first change in reimbursement policy that allowed CDEs to be reimbursed by Medicaid for the delivery of diabetes education. In 2011, a new law was passed that expanded reimbursement benefits to all diabetes education programs certified by the American Diabetes Association (ADA), the American Association of Diabetes Educators, or Indian Health Services. Next steps include expanding reimbursement for diabetes prevention and management services beyond DSME/T.

### Program Timeline:

2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>Call to action: Put Patients First</li> </ul>		<ul style="list-style-type: none"> <li>Legislation passed for reimbursement of delivery of diabetes education by CDEs</li> </ul>	<ul style="list-style-type: none"> <li>Outreach to CDEs</li> </ul>	<ul style="list-style-type: none"> <li>New law passed expanding reimbursement benefits for all programs certified by ADA or AADE</li> </ul>	

**Key Stakeholders:** State Medicaid Office, Office of Health Insurance Program, NYS Diabetes Coalition.

**Target Population:** Medicaid recipients who have diabetes.



## Implementation

### Key Program Components

- The DPCP held quarterly meetings with the state Medicaid office to discuss mutual goals, state reimbursement policies, and any concerns.
- The DPCP researched and presented educational coverage for Medicare, private insurers, Medicaid coverage in other states, and third party insurers.
- The DPCP wrote a white paper that outlined the problem of skyrocketing costs of diabetes care and the proposed policy change to address this problem. They shared the white paper with key stakeholders, including state legislators, who pushed the agenda forward.
- Following changes to the state reimbursement policy, the DPCP partnered with the Office of Health Insurance Program and the Medicaid office to promote the availability of reimbursement through telephone calls and letters to CDEs and health care providers. They created an electronic mailing list for CDEs to have ongoing means of communication.
- The DPCP plans to distribute educational materials (e.g., office posters, informational packets) to providers about available DSME/T programs and to Medicaid providers to encourage them to refer patients to available DSME/T programs.

### Required Resources

- **Staff:** A full-time state-level coordinator and a coordinator of professional education
- **Funding:** Cost to implement program is not available at the time of this writing
- **Other:** Existing relationship with Medicaid staff

### Implementation and Maintenance Tips

The DPCP offered a tip for successful implementation of a reimbursement policy program:

- **Identify a Medicaid champion.** The DPCP found an advocate within the Medicaid office willing to collaborate and champion the effort. One of the medical directors at New York's Medicaid office was an endocrinologist who was passionate about policy change. He believed in the value of DSME/T and the proposed policy. Because of his position and profession, he was able to elevate the issue within the department and with decision makers, and he was able to lead the task force and maintain momentum and energy around this issue.



## Evaluation Approach

In collaboration with NYS Health Foundation's Diabetes Campaign and SUNY's Center for Health Workforce Studies, the DPCP conducted a market analysis of NYS CDEs to determine the numbers and geographic dispersion of CDEs, as well as facilitators and challenges to providing DSME/T.

Evaluation of the new policies began with an initial assessment of billing of services and geographic mapping to determine changes in reimbursement claims and any geographic disparities in claims submission. Medicaid was able to access data on health care costs related to people with diabetes. Next steps will include an evaluation of clinical measures, such as inpatient admissions and emergency department visits pre- and post-legislation.

### Key Program Achievements

#### Process Outcomes

- Legislation passed for reimbursement of delivery of diabetes education by CDEs
- Legislation expanding reimbursement benefits for all programs certified by ADA or AADE

#### *CDE study key findings:*

- 1,000 CDEs in NYS
- Majority of CDEs in urban areas
- An unmet need for diabetes education reported in their regions
- Access to DSME/T is inadequate at diagnosis and follow-up reported
- 69 CDEs are enrolled in the NY Medicaid Program



## Related References, Resources, and Tools

- White paper and legislation available upon request from the NY DPCP.

# MARYLAND PATIENTS, PHARMACISTS AND PARTNERSHIPS PROGRAM™



The Maryland Diabetes Prevention and Control Program (DPCP) and the Maryland Heart Disease and Stroke Prevention (HDSP) program partnered with the University of Maryland School of Pharmacy to implement statewide the Patients, Pharmacists and Partnerships Program™ (P<sup>3</sup> Program). Modeled after a pilot program in Asheville, North Carolina, the P<sup>3</sup> Program used trained pharmacists to assist patients with medication therapy management, adherence to therapy, and chronic disease self-management. The P<sup>3</sup> Program was offered by self-insured employers as a voluntary “opt-in” health benefit for their covered employees and dependents.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.3	Core Diabetes Strategy 2.5
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk, to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Implement evidence-based programs and policies within worksites that contribute to improved control of A1C, blood pressure, and cholesterol, and promote tobacco cessation among people with diabetes.	Expand the role of allied health professionals by replicating and scaling evidence-based programs founded on the principles of the Asheville Project and the Diabetes 10-City Challenge.



## Program Planning, Start-Up, and Growth

In 2006, the P<sup>3</sup> Program was initiated by the University of Maryland School of Pharmacy (UMSOP) in collaboration with the Medicaid Program in the Maryland Department of Health and Mental Hygiene (DHMH). The Maryland DPCP became involved in 2007 when the P<sup>3</sup> Program was moved to Public Health Services within DHMH. The Maryland HDSP program also partnered with the P<sup>3</sup> Program to address hypertension management. P<sup>3</sup> Program employer sites were initially dispersed throughout various rural, suburban, and metropolitan regions in Allegany County, Frederick County, Howard County, and Baltimore City, and have since expanded to include employers in Baltimore County.

### Program Timeline:

2006	2007	2008	2009	2010	2011
<ul style="list-style-type: none"> <li>P<sup>3</sup> Program initiated by UMD School of Pharmacy with Medicaid and one self-insured employer in Western Maryland</li> </ul>	<ul style="list-style-type: none"> <li>Program moved from Medicaid to Public Health Services within DHMH</li> </ul>	<ul style="list-style-type: none"> <li>Program expanded to four additional self-insured employers across the state</li> </ul>		<ul style="list-style-type: none"> <li>Over 300 pharmacists trained and approximately 225 employees or their family members served</li> </ul>	

**Key Stakeholders:** In addition to the Maryland DHMH, stakeholders included the Department of Pharmacy Practice and Science at the UMSOP, the Maryland Pharmacists Association, and the Mid-Atlantic Business Group on Health, an association of employer health care purchasers that promoted the role of pharmacists in programs like the P<sup>3</sup> Program.

**Target Population:** Maryland residents with hypertension, hyperlipidemia, and/or diabetes who were residents in select counties and work for participating employers.



## Implementation

### Key Program Components

#### Recruitment of employers and employees

- The P<sup>3</sup> Program recruited self-insured employers to participate in the program and supports the role of the pharmacist in promoting health.
- The Maryland Pharmacists Association and UMSOP recruited and trained pharmacists within the plan's network.
- Participating employers led recruitment and enrollment of participants in collaboration with the Maryland P<sup>3</sup> team.
- Employees and their family members diagnosed with diabetes were informed of the program through health fairs and mailings.

#### Program implementation

- Pharmacists received specialized training in comprehensive medication therapy management, diabetes chronic disease management, and motivational interviewing.
- Pharmacists delivered comprehensive medication therapy management and counsel about lifestyle changes at the work site or community setting
- Pharmacists followed-up and shared results with participants' primary care providers. They also connected with business leaders to recommend policy changes that promote wellness.
- Pharmacists and primary care providers used signed collaborative agreements to establish roles and expectations to facilitate communication and determine treatment plans.

#### Program support

- The P<sup>3</sup> Program provided a Web-based documentation system used by pharmacists to compile clinical, behavioral, and medication adherence data, track their efforts, and share written recommendations with primary care providers.
- The DPCP, through a contract with UMD, supported the infrastructure for the pharmacist training and provides technical assistance and evaluation support.
- UMSOP's Department of Pharmacy Practice and Science coordinated the partnership, manages the program, trained the pharmacists, and produced clinical end economic reports.
- Employers provided payments to the pharmacists providing care to employees in the program and waived copayments for diabetes-related medications and supplies for participants.

### Required Resources

- **Staff:** The Maryland DPCP was supported by 1.5 FTEs. The program coordinator and epidemiologist worked on both the DPCP and the HDSP programs.
- **Funding:** The Maryland HDSP program provided \$150,000 for the P<sup>3</sup> Program to address hypertension management. Support was also provided by various private funders.
- **Other:** Other resources included Web-based software that pharmacists can use to document and track patient data, health care issues, and treatment recommendations, as well as preexisting partnerships between pharmacists and the business community.

## Implementation Challenges

The Maryland DPCP faced three major challenges in implementing the program:

- Recruitment of businesses was slow; time and effort were needed to recruit businesses. Most of the initial recruitment was through presentations made by the P<sup>3</sup> Program staff to businesses in the area and at meetings. Efforts are now underway to work with business leaders to design recruitment materials that build on the results of the 2010 and 2011 program evaluation.
- The P<sup>3</sup> Program needed a strong marketing plan. To compete with similar reimbursable programs, the P<sup>3</sup> Program marketed the comprehensiveness and cost savings of the program. The program needed more personnel for marketing.
- The program lacked a large employer advocate. The P<sup>3</sup> Program worked with smaller self-insured businesses that were not part of a larger network. A large employer or multiple small employers could have advocated for inclusion of the P<sup>3</sup> Program in benefits packages and gotten payers on board.

## Implementation and Maintenance Tips

The P<sup>3</sup> Program offered the following tips for successful implementation and maintenance of the program:

- **Maintain open communication.** The DPCP recommended obtaining the participation of all key partners through open communication: the patient, pharmacist, employer, insurer, and primary health care provider. They also established collaborative practice agreements between pharmacists and practitioners.
- **Establish one database system.** One Web-based system that combined all data into a single database and facilitates pharmacist quality assurance reviews and analysis of outcomes was a helpful strategy.
- **Use a comprehensive approach.** The DPCP recommended a broad application of program to chronic disease prevention and control by offering a comprehensive approach that addressed comorbid conditions, such as hypertension.



## Evaluation Approach

The evaluation of the P<sup>3</sup> Program focused on examining clinical and cost data for individuals pre- and post-enrollment in the program and comparing clinical outcomes and cost to other commercial plans. The DPCP assisted in the evaluation of clinical and economic outcomes of the P<sup>3</sup> Program using participants' laboratory values, vital signs, and paid medical and pharmacy claims.

The most significant change was a 33% reduction of emergency department (ED) visits and hospitalizations for the study population 12 months before and after the program initiation.

## Evaluation Lessons Learned

- The DPCP recommended framing data in a way that was appealing and understandable to employers and the general public to increase the number of employers in the program.

### Key Program Achievements

#### Process Outcomes

From 2009–2012:

- Approximately 500 employees throughout Maryland served
- Over 300 pharmacists trained
- Over 84% of participants reached proficient or advanced levels of knowledge about diabetes at 12 months

#### Diabetes Care Outcomes

From 12 months before to 12 months after program initiation:

- ED visits and hospitalizations decreased by 33%
- 58% of participants were proficient or advanced in skill development
- 64% were proficient or advanced in performance of self-care tasks

#### Health Outcomes

When compared with national and Maryland Commercial Healthcare Effectiveness Data and Information Set (HEDIS) 2012 rates:

- 79% of P<sup>3</sup> participants had A1C less than 8%, vs. 62% and 64% for national and Maryland commercial plans
- 84% of P<sup>3</sup> participants with improved LDL rates vs. 47% and 46% for national and Maryland commercial plans
- 84% of P<sup>3</sup> participants had good blood pressure (SBP ≤ 140/90 mmHg) control vs. 64% of national commercial plan enrollees with diabetes
- Average cost savings per patient per year are estimated at \$1,599



### Related References, Resources, and Tools

- The Maryland Department of Health and Mental Hygiene Clinical Innovations Website: <http://dhmh.maryland.gov/innovations/SitePages/maryland-p3-program.aspx>.



# CALIFORNIA “DO YOU cAARD?” CAMPAIGN



“Do You cAARD?” was part of the “Be Proactive: Help Your Patients Quit Smoking” campaign, a collaboration between two California Department of Public Health programs—the California Tobacco Control Program (CTCP) and the California Diabetes Program (CDP)—and the California Smokers’ Helpline, a CTCP-funded program implemented by the University of California, San Diego. “Do You cAARD?” was designed to increase the frequency that diabetes educators and other health care providers asked about the smoking status of people with diabetes, advised them to quit, and referred them to the free Smokers’ Helpline.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.4
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Increase access to tobacco cessation services (e.g., quitlines) for adult tobacco users with diabetes.



## Program Planning, Start-Up, and Growth

In 2006, the CDP created and supported a statewide task force of certified diabetes educators to develop the “Do You cAARD?” campaign. The campaign was based on the *Ask, Advise, Refer* approach adapted from the “5 As” (Ask, Advise, Assess, Assist, Arrange) of the U.S. Public Health Service’s clinical practice guideline, *Treating Tobacco Use and Dependence* (Fiore et al., 2000) and informed by a statewide survey of Certified Diabetes Educators (CDEs). It was tested in focus groups at a national American Association of Diabetes Educators (AADE) meeting. With funding (2005–2010) from CDC’s Office on Smoking and Health (OSH), the CDP conducted an extensive media and educational campaign targeting diabetes educators and other health professionals to promote referral of patients with diabetes to the Smokers’ Helpline. Initially, diabetes educators were offered face-to-face training through chapters of the American Association of Diabetes Educators (AADE) and at a national workshop. Subsequently, Web-based training was provided and continues beyond the CDC funding period. CTCP funds support the online program. Other health care providers were reached via partnerships with the California Medical Association Foundation, adapting the “Do You cAARD?” toolkit for different types of health care providers, and developing trainings for *promotoras* and medical assistants. The campaign was disseminated, including through presentations at national conferences (American Public Health Association, AADE, CDC/DDT) and through technical assistance provide to numerous DPCPs and TCPs. The DPCP experience provided reference and support for the CDP’s invitation to participate in the Centers for Medicare and Medicaid Services Medicaid Incentives for the Prevention of Chronic Disease (MIPCD) grant with California’s Medicaid program.

## Program Timeline:

2006	2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"><li>• Task force convened</li><li>• State CDEs surveyed</li><li>• Focus testing conducted</li></ul>	<ul style="list-style-type: none"><li>• “Do you cAARd?” training workshop held at national AADE meeting in Washington, DC</li></ul>		<ul style="list-style-type: none"><li>• Web-based training program went live</li><li>• Technical assistance provided to DPCPs and TCPs</li></ul>		<ul style="list-style-type: none"><li>• Online CE program renewed with AADE</li></ul>	<ul style="list-style-type: none"><li>• “Do you cAARd?” task force continues to provide expertise to the Helpline and for tobacco cessation interventions statewide</li></ul>

**Key Stakeholders:** The CTCP and the California Smokers’ Helpline were collaborators in the campaign. Leaders of the California chapters of the AADE were recruited as project champions and task force members. The Smoking Cessation Leadership Center at the University of California, San Francisco was a key partner in this project as they supported the task force with technical assistance and facilitated performance partnerships on tobacco cessation throughout the state. The Diabetes Coalition of California and the California chapters of the American Association of Clinical Endocrinologists invited the task force members to present and promote the campaign among their members.

**Target Population:** Diabetes educators and other health care providers who treat persons with diabetes who smoke.



## Implementation

### Key Program Components

- The campaign developed information for diabetes educators and health care providers about diabetes and smoking. The campaign used the Ask, Advise, Refer smoking cessation intervention and Helpline services.
- The campaign disseminated information through educational events, advertisements and pieces in professional newsletters, and the online Diabetes Information Resource Center ([www.caldiabetes.org](http://www.caldiabetes.org)).
- The CDP provided technical assistance to chapters of the AADE to support their efforts in promoting the campaign to their members. In addition, CDP state and regional staff, as well as Helpline outreach staff, promoted the project through presentations at professional conferences and trainings and in professional newsletters.
- As part of the “Do you cAARd?” initiative, the following tools and services were provided to diabetes educators:
  - The “Do you cAARd?” toolkit for Diabetes Educators and other health care providers
  - Wallet-sized “Helpline Gold Cards” with the Helpline toll-free number in English and Spanish
  - Materials for patients that were developed specifically for persons with low literacy and non-English speakers (Spanish, Korean, Vietnamese, and Chinese)
  - An AADE-accredited continuing education program on diabetes and tobacco cessation (in-person training and later an online version)
  - Educational opportunities offered statewide by the “Do you cAARd?” task force and CDP and Helpline outreach staff
  - The campaign set a goal of increasing the percentage of diabetes educators who made at least one referral to the Helpline from a baseline rate of 44% to 75%.

## Required Resources

- **Staff:** 1.5 FTE for 4 years; a volunteer task force of certified diabetes educators developed and supported implementation of the campaign.
- **Funding:** \$187,000 per year for four years from OSH, which was used for staff and other resources described below.
- **Other:** Material development and production (“Do you cAARd?” toolkit), mailings for the ad campaign, training materials, and travel of program staff and task force members to meetings to train diabetes educators and health providers.

## Implementation Challenges

- Reduction of program field staff and loss of program funding decreased the support to the “Do you cAARd?” task force, but the task force continued their work to increase tobacco cessation efforts.
- The CDP had indirect access to and influence on educators and providers. It had to work through partners to reach these groups.
- Continuous review and update of the online CE program was very resource intensive. The cost of upgrading the online functions of the CE program was also a challenge.

## Implementation and Maintenance Tips

The program offered several tips for successful implementation and maintenance of a tobacco cessation program:

- **Strategize to maximize adoption.** The DPCP facilitated adoption of *Ask, Advise, Refer* by first assessing what diabetes educators know about quitline resources and also ensuring that the recommended intervention is simple to integrate into current practice.
- **Broaden application to chronic disease prevention and control.** The DPCP partnered with related chronic disease programs, in this case the CTCPC, to maximize public health resources.
- **Understand the value of evaluation data.** The recommended facilitating continued interest in and support of the program by obtaining and sharing quality evaluation data.
- **Provide online training.** One strategy to minimize costs was to deliver online (vs. face-to-face) training. Following the ending of funding, the “Do You cAARd?” program was sustained via continuation of online training.
- **Create mechanisms for sustainability.** The task force functioned voluntarily, and the CDP integrated the “Do You cAARd?” program into their CDC objectives for tobacco cessation.



## Evaluation Approach

The Helpline provided data on the main impact measures of number and percentage of persons with diabetes who called the Helpline. An online, cross-sectional survey of diabetes educators was conducted each year, from 2006 through 2009, to measure awareness of the campaign and the Helpline and to evaluate referrals to the Helpline. Interpretation of the results was limited by the low response rate (approximately 10% each year). Utilization of the online training, Website activity, and numbers of materials ordered was also tracked by the DPCP.

## Evaluation Lessons Learned

- Implementing a survey of the state diabetes educators provided extremely valuable data despite the low response rate.

### Key Program Achievements

#### Process Outcomes

- 170 diabetes educators reached and trained (out of approximately 1,000 in the state)
- Increase in Website visits from 1,876 (2007) to 5,899 (2009) and download of “Do You cAARd?” toolkit from 108 (2007) to 408 (2009); however, decrease in number of materials ordered by health care providers from 53,000 (2006) to 14,000 (2009)
- In May/June 2009, 27 persons completed the online training for credit; since then (2009-2012) another 300 CE exams have been completed
- Increase in both number and percentage of callers with diabetes from baseline: 9.7% (n = 1,126) (2006); 11.6% (n = 3,070) (2008); 10.9% (3,480) (2009)
- Increase in the percentage of callers with diabetes who were referred by a clinic or provider from 41.6% (2007) to 46.1% (2009)
- Increase in the percentage of diabetes educators referring patients to Helpline, from 44% (2006) to 80% (2009)
- Increase in the percentage of diabetes educators with knowledge of the 1-800 Helpline number, from 33% (2006) to 48% (2008)



## Related References, Resources, and Tools

- **Program Website:** [http://www.caldiabetes.org/content\\_display.cfm?contentID=497](http://www.caldiabetes.org/content_display.cfm?contentID=497)
- **Evaluation report:** *Be Proactive: A Campaign to Promote Smoking Cessation among People with Diabetes via Health Care Providers. A Report on Program Activities and Outcomes from the Diabetes and Tobacco Cessation Project, July 2008–June 2009.* Available from Tami MacAller ([Tami.Macaller@cdph.ca.gov](mailto:Tami.Macaller@cdph.ca.gov)).
- **?? report:** Fiore, M. C., Bailey, W. C., Cohen, S. J., et al. (2000). *Treating tobacco use and dependence: A clinical practice guideline.* Rockville, MD: US Department of Health and Human Services. AHRQ publication No. 00-0032.
- **Published article in The Diabetes Educator:** MacAller, T., Brown, M., Black, K., & Greenwood, D. (2011). Collaborating with diabetes educators to promote smoking cessation for people with diabetes: The California experience. *The Diabetes Educator*: [http://www.caldiabetes.org/content\\_display.cfm?contentID=497](http://www.caldiabetes.org/content_display.cfm?contentID=497)
- **Diabetes Program Issue Brief:** Tong, E., MacAller, T., Modayil, M., & Schillinger, D. (2011). *Overlapping epidemics: Tobacco and diabetes prevention and control in California* (Issue Brief). California Diabetes Program, California Department of Public Health Document: [http://www.caldiabetes.org/content\\_display.cfm?contentID=1306](http://www.caldiabetes.org/content_display.cfm?contentID=1306)

# VERMONT COMMUNITY, SELF-MANAGEMENT SUPPORT, AND PROVIDER PRACTICE PROGRAM



The Community, Self-Management Support, and Provider Practice Program was a multi-pronged intervention of the Vermont Diabetes Prevention and Control Program (DPCP) in partnership with the Vermont Blueprint for Health (Blueprint). The program focused on statewide dissemination of the Stanford Chronic Disease Self-Management Program (CDSMP) and the Diabetes Self-Management Program (DSMP). The DPCP coordinator was a master trainer in the Stanford CDSMP and DSMP and assisted with program dissemination and follow-up self-management support throughout the state. CDSMP and DSMP are offered in hospitals, local clinics, other health care facilities and community centers.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.1
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Expand access to diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality of life outcomes for people with diabetes.



## Program Planning, Start-Up, and Growth

In 2004, the Vermont Department of Health initiated the public-private partnership known as the Blueprint as part of statewide health care reform. The Blueprint was tasked with implementing an initiative to help address the growing chronic disease epidemic in the state. The DPCP coordinator advised the state to include the Stanford CDSMP as a component of the chronic care initiative. CDSMP was introduced in 2004, had spread to half of the 14 health service areas by 2006, and was in 13 of the 14 areas in 2009. The coordinator had already partnered with a network of diabetes educators providing traditional Diabetes Self-Management Education/Training (DSME/T) and used this network as advisors for implementation of the Stanford programs. DSMP was introduced in 2009 and had spread to 6 of 14 health service areas in 2010. Since initiation, the program has demonstrated results that have convinced Medicaid, state legislators, and other state health care leaders to provide funding for the self-management programs, which have helped to sustain the statewide effort.

### Program Timeline:

2006	2007	2008	2009
<ul style="list-style-type: none"> <li>• Blueprint initiated</li> <li>• CDSMP introduced</li> </ul>	<ul style="list-style-type: none"> <li>• CDSMP spread to 7 of 14 health service areas</li> </ul>	<ul style="list-style-type: none"> <li>• DSMP introduced</li> <li>• CDSMP implemented in 13 of 14 areas</li> </ul>	<ul style="list-style-type: none"> <li>• DSMP spread to 6 of 14 health service areas</li> </ul>

**Key Stakeholders:** Network of DSME/T providers, Blueprint for Health.

**Target Population:** Adults who have diabetes and other chronic conditions, or who are at risk for diabetes; providers seeing those patients.



## Implementation

### Key Program Components

- The DPCP coordinator was a master trainer in the Stanford CDSMP and DSMP and trained leaders statewide. The DPCP coordinator worked with Blueprint staff to assist regional coordinators from 14 health service areas to market the programs, identify delivery sites, and deliver the Stanford programs (called Healthier Living Workshops in Vermont).
- A central coordinator employed by the Blueprint oversaw the distribution of resources and materials for Stanford workshops delivered throughout the state and managed the databases of available programs and participant data.
- The DPCP provided technical assistance to the Blueprint staff who convened monthly conference calls and annual live meetings with regional coordinators from all health service areas to coordinate program delivery and share implementation barriers and strategies for addressing them.
- The DPCP worked with Blueprint staff to develop resources for primary care system redesign and for community health teams (CHTs) staffed by local, Stanford-trained nurses and allied health care providers. The CHT staff collaborated with local primary care providers and calls their patients who had poorly controlled diabetes to recommend a Healthier Living Workshop close by.

### Required Resources

- **Staff:** 1 FTE state DPCP coordinator, 0.25-0.5 FTE for public health analyst who assisted the DPCP and the Blueprint with data management.
- **Funding:** Approximately \$463,000 is spent on 3 Stanford programs (Chronic disease, diabetes, and pain management) including a live, in-person tobacco cessation program. The funds are distributed as grants to 13 health service areas.
- **Other:** Vermont used a Microsoft Access™ database developed by the public health analyst to track fidelity to the program.

### Implementation Challenges

- Prior to introducing the Stanford programs, there was an existing network of diabetes educators providing traditional DSME/T. The educators initially resisted accepting the new programs because they thought that the new programs would take participants away from the traditional DSME/T classes.
- The DPCP coordinator was also an administrative assistant, scheduler, and the central coordinator managing the CDSMP database. As the DPCP coordinator said, "We have too few people doing too many tasks."

### Implementation and Maintenance Tips

The Vermont DPCP offered tips for successful implementation and maintenance of a CDSMP:

- **Share best practices.** Vermont took note of what was working in progressive parts of the state and applied that to other areas. The program staff got advice from health department staff in other states and health care systems in other countries (e.g. Calgary, Canada) performing similar work.

- **Broaden focus to facilitate sustainability.** They focused on the application of CDSMP for *chronic disease*, not just diabetes. This provided a wider range of funding opportunities and increased the reach of self-management programs. At a point where an opportunity existed within a state to promote the Stanford DSMP, they seized that opportunity, such as in the states for which the Administration on Aging provided technical assistance for Area Agencies on Aging to get accreditation and reimbursement for the Stanford DSMP (Texas, Michigan, Indiana, California, and Massachusetts).



## Evaluation Approach

Stanford program results were measured via participant satisfaction surveys, registries, and chart audits. Vermont used Docsite to monitor panels of patients with diabetes and other chronic diseases. Docsite was a registry that can be queried by providers and select program staff.

For patients who attended Healthier Living Workshops, the coordinators previously administered a self-assessment questionnaire at baseline, 6 months post-workshop, and 12 months post-workshop. The questionnaire measured self-efficacy and performance of self-management behaviors, actual behavior change (e.g., physical activity, diet), and utilization of health care. After years of consistently good data, this portion of the evaluation was eliminated. Workshop participants then completed demographic and health data at baseline and program satisfaction data upon conclusion of the 6-week workshops. The Blueprint worked with the vendor for the all-payers-claims-database to identify workshop participants in the de-identified data set. The data will be used to evaluate effects of the programs on health care utilization and cost and on HEDIS measures.

On the provider side, Vermont conducted chart audits and reviews the charts of patients with diabetes diagnoses (among other conditions) and looks for evidence of care management, self-management support, and changes in clinical indicators. Self-management support is also measured during National committee for Quality Assurance's Patient Centered Medical Home recognition.

## Evaluation Lessons Learned

- It was important to look for existing data systems that captured health outcomes and utilization data to use as a source of information for evaluation beyond self-reported outcomes.
- Workshop retention was increased by rewarding regional coordinators for the number of participants who complete the workshops.
- Hospital-based regional coordinators, while continuing to connect with social services networks, also had a strong relationship with the health care community and were able to connect health care reform initiatives with community-based workshops. For example, regional coordinators worked with primary care practices seeking recognition through NCQA as patient-centered medical homes to use panel management to recruit appropriate participants into self-management programs.

### Key Program Achievements

#### Process Outcomes

- 2,200 participants completed the programs (including all 3 Stanford workshops: chronic disease, diabetes, and pain).



### Related References, Resources, and Tools

- Blueprint for Health Website: <http://healthvermont.gov/blueprint.aspx>



# MINNESOTA DIABETES & HEART HEALTH COLLABORATIVE



The Minnesota Diabetes & Heart Health Collaborative (MN-DC) was a consortium of 17 leading health care organizations, including governmental public health agencies, nonprofit organizations and associations, and public and private health plans and health systems, which collaborated to develop and deliver common diabetes prevention and control messages to providers and consumers statewide. The MN-DC's mission was to make diabetes-related health communications more consistent, promote best care practices, coordinate activities, and leverage resources to improve prediabetes and diabetes outcomes. MN-DC's messages reached 85% of Minnesotans with diabetes and 90% of health care providers, including most primary care providers, all 72 local public health departments, over 400 senior centers, and most parish and home health nurses and community health workers. The MN-DC was Minnesota's primary vehicle for spreading National Diabetes Education Program (NDEP) messages and resources.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.7
Increase access to sustainable self-management education and support services for populations with the greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	As a complement to work occurring under strategies 2.1-2.6, promote health communication campaigns or coalition initiatives that will contribute to increasing access to sustainable self-management education and support services for people with diabetes.



## Program Planning, Start-Up, and Growth

In June 2000, Stratis Health, Minnesota's Medicare Quality Improvement Organization, brought together key stakeholders, including the Minnesota Diabetes Prevention and Control Program (DPCP), the Minnesota Diabetes Association, and health plans, to see what could be done collaboratively. The group chose as its main goal to improve the quality of messages about diabetes and to advance best practices to support healthy behaviors in the community. A major challenge to this goal was the lack of consistent messages about diabetes. As a result, the MN-DC created common messages for public and health care providers by repackaging NDEP and American Diabetes Association (ADA) materials and disseminating these through the members of the collaborative.

### Program Timeline:

2000	2002	2010	2011
<ul style="list-style-type: none"> <li>Collaborative formed with eight members, including DPCP, private and public health plans, and nonprofit organizations</li> </ul>	<ul style="list-style-type: none"> <li>DPCP became co-chair of the MC-NC</li> </ul>	<ul style="list-style-type: none"> <li>Collaborative expanded to become the MN Diabetes and Heart Health Collaborative</li> </ul>	<ul style="list-style-type: none"> <li>The Minnesota American Heart Association/ American Stroke Association-Minnesota Area became the 17th member of the collaborative</li> </ul>

**Key Stakeholders:** The MN-DC had 17 member health care organizations, which included governmental public health agencies (the Minnesota Diabetes Prevention and Control Program, the Minnesota Heart Disease & Stroke Prevention Program), nonprofit organizations and associations (the Minnesota Chapter of the ADA, the Minnesota American Heart Association/American Stroke Association, the Minnesota Community Measurement, the Institute for Clinical Systems Improvement, Minnesota State Diabetes Educators), eight public and private health plans, and one health system (HealthPartners).

**Target Population:** Persons with diabetes and prediabetes and caregivers in the health care system, lay health workers, and family members. Efforts specifically targeted seniors, Medicare beneficiaries, racial/ethnic minorities, and community health workers.

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## Implementation

### Key Program Components

- The DPCP co-led the MN-DC. The DPCP's main efforts with MN-DC consisted of coordinating, documenting, and evaluating the group's activities. This included facilitating meetings, researching topics, identifying resources such as NDEP, maintaining the Website, recruiting members, scheduling speakers, writing grants, publishing articles, making presentations, and leading strategic planning.
- The collaborative held regular meetings during which it chooses priority activities. Collaborative members volunteered for these activities and sought in-kind resources from their organizations.
- The MN-DC created patient and provider education materials on diabetes, prediabetes, and cardiovascular disease that include posters, handouts, flip charts, and Web-based tool sets with instructional sections. Additionally, the MN-DC created campaign messages such as "Make the Link Between Diabetes and Heart Disease," which it disseminates through its Website, press releases, public service announcements, direct mail, ad placements in newsletters and other local publications, handouts for health professionals and patients, and exhibits and presentations.
- The MN-DC conducted culturally appropriate campaigns with other organizations, such as the Minnesota Ophthalmology Association, to target groups such as seniors in need of diabetic eye exams. MN-DC developed a low health literacy patient handout in three languages and a scripted flip chart, as requested by community health workers. An unpaid intern who was a nutrition graduate student helped expand the flip chart content to create an online tool set.
- The MN-DC supported awareness and consistent messaging by working with a variety of organizations and initiatives, including the Department of Human Services/Health Plan Collaborative Performance Improvement Project (PIP) for diabetes-related projects and "I CAN Prevent Diabetes," a diabetes prevention program (<http://www.icanpreventdiabetes.org/>).
- The MN-DC participated in work groups to provide input and support promotional efforts with organizations such as ECHO Minnesota (Emergency Community Health Outreach), a nonprofit educational program targeting non-English speaking residents, NDEP work groups, and the ADA.

### Required Resources

- **Staff:** .25 FTE staff time provided by DPCP and in-kind staff time by member organizations.
- **Funding:** Small amounts of funding to produce print materials, create and maintain the website, and purchase graphics and advertisement placement.
- **Other:** Approximately \$75,000 per year of in-kind contributions from member organizations, including staff time to support their involvement. In-kind health professional tools and resources, graphic design work, and travel and registration for local and national conferences to make presentations.

## Implementation Challenges

The MN-DC encountered two major challenges when implementing their health communication and promotion efforts:

- High turnover because of job changes by individuals representing member organizations made new relationships and ways of working together necessary.
- Lack of consistent funding to support the work and to ensure dedicated staffing by the DPCP and the co-host organization, Stratis Health was also a challenge. The group also struggled with securing and managing grants because it was not a 501(c)(3) organization and had no fiscal agent.

## Implementation and Maintenance Tips

The MN-DC offered several tips for successful implementation and maintenance of a health communications program, including:

- **Maintain relationships.** The DPCP recommended establishing and maintaining good relationships with member organizations, and promoting collective buy-in by exploring collaborative communication efforts, including tailoring efforts to specific populations or settings.
- **Use networks.** The DPCP recommended tapping into member organizations' networks and communication channels to promote buy-in and enhance reach. Identifying communication gaps, such as health literacy worked to meet community needs.
- **Broaden application to chronic disease prevention and control.** The DPCP applied communications efforts more broadly to chronic disease, rather than just to diabetes. This expanded reach by addressing the connection between heart disease and diabetes and the increased risk of heart attacks and stroke for people with diabetes.



## Evaluation Approach

The MN-DC periodically surveyed primary care providers to assess their satisfaction with and to see how they use the materials. The MN-DC also calculated the estimated reach of its programs to the target audiences. No evaluation of outcomes has been conducted to date.

## Evaluation Lessons Learned

- MN-DC health communication efforts appeared to have a wide reach. However, it was difficult to determine the extent to which these efforts have actually done more than connect to health care providers, lay health workers, and patients and their families.

### Key Program Achievements

#### Process Outcomes

- Approximately 85% of people with diabetes reached in Minnesota.
- A survey of 50 users of *Control Your Diabetes for Life* health literacy flip chart gave a satisfaction rate of 95%.



## Related References, Resources, and Tools

- Minnesota Department of Health, Health Promotion and Chronic Disease Division, Center for Health Promotion Diabetes Program Website: [www.health.state.mn.us/diabetes/](http://www.health.state.mn.us/diabetes/)
- Minnesota Diabetes and Heart Health Collaborative Website: [www.mn-dc.org](http://www.mn-dc.org)

# KENTUCKY DIABETES TODAY PROGRAM



Diabetes Today was a training program designed to empower community leaders to examine diabetes-related challenges in their local areas and work together to improve and possibly resolve identified priority issues. Resulting interventions were tailored to the community and range from patient assistant programs to changes in the built environment, such as the creation of walking trails. With guidance and support from CDC, the Kentucky Diabetes Prevention and Control Program (KDPCP) used the Diabetes Today model ([http://www.cdc.gov/diabetes/projects/d\\_today.htm](http://www.cdc.gov/diabetes/projects/d_today.htm)) over the last several years in communities across the state to meet critical needs related to diabetes awareness, self-management education, care, and support.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.7
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	As a complement to work occurring under strategies 2.1-2.6, promote health communication campaigns or coalition initiatives that will contribute to increasing access to sustainable self-management education and support services for people with diabetes.



## Program Planning, Start-Up, and Growth

In 1993, with CDC support, the KDPCP piloted implementation of the CDC Diabetes Today model in Mercer County, a rural Kentucky community with limited diabetes resources. After the pilot proved successful, the KDPCP made plans to promote the approach in communities across the state. They arranged for or provided Diabetes Today facilitator training to more than 90 participants, used CDC funds to make small start-up or maintenance mini-grants available, and provided technical assistance. As of 2012, more than 45 local diabetes coalitions have been formed and are still active. Local health departments have been key partners in formation of many or most of these coalitions as it aligned with their role in public health to “mobilize community partnerships to identify and solve health problems.” The KDPCP then used the Diabetes Today framework and the experience gained from having established several successful local coalitions to launch a state coalition, which became known as the Kentucky Diabetes Network (KDN). Local coalitions were encouraged to have representation in the state coalition. The KDPCP also helped encourage, minimize duplication of funding for, and provide coordination with similar opportunities in Kentucky associated with the Appalachian Diabetes Translation Project, the Vulnerable Populations Grant, and the National Association of City and County Health Officials Diabetes Today effort.

### Program Timeline:

1993	1994	1995	1997	1999	2001	2012
<ul style="list-style-type: none"> <li>Pilot initiated in rural site</li> </ul>	<ul style="list-style-type: none"> <li>Facilitator training provided by CDC</li> </ul>	<ul style="list-style-type: none"> <li>Initial mini-grants made available</li> <li>First coalitions formed</li> </ul>	<ul style="list-style-type: none"> <li>Facilitator training provided by DPCP</li> </ul>	<ul style="list-style-type: none"> <li>KDN state coalition started</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing mini-grants</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 45 active local coalitions and 1 state coalition in existence</li> </ul>

**Key Stakeholders:** Diabetes Today coalition partners, including local health departments, Cooperative Extension Services, media representatives, diabetes educators, hospitals, local officials, pharmacies, and schools.

**Target Population:** High-risk populations, including Appalachians, senior citizens, African Americans, Hispanics, individuals with diabetes or prediabetes, health care professionals/providers, and local/state decision makers.



## Implementation

### Key Program Components

- The KDPCP partnered with CDC to do the initial facilitator training for state-funded local health department nurses and dietitians who worked in population-focused efforts for persons with or at risk for diabetes. The effort was built on the infrastructure of the state-funded public health program. Additional training was offered by the KDPCP.
- KDPCP staff helped provide coordination and management for the Diabetes Today efforts across the state, but as was consistent with the model, the program was implemented by the community with the assistance of the trained facilitator(s).
- A one year work plan was submitted by community groups who received the mini-grant.
- KDPCP staff provided ongoing technical assistance, training opportunities, access to available resources, access to the most current diabetes information, and opportunities to profile coalition work in the state newsletter or at conferences.
- The work of each Diabetes Today coalition stemmed from their unique community strengths, opportunities, needs, and priorities. Interventions were diverse and community initiated. Some examples were patient assistance programs, programs to support behavior change (walking clubs/exercise challenges, weight-loss programs), policy changes (smoke-free ordinances, healthier vending choices in schools and worksites), environmental changes (walking/biking trails, ordinances for safety lighting), professional education programs with distribution of office change tools (Diabetes Care Tool, Diabetes Standing Orders, Immunization Standing Orders), screenings (foot, eye, kidney, prediabetes/diabetes), and worksite wellness programs and public awareness campaigns related to diabetes or diabetes prevention.
- The KDPCP required one or more common expectation across funded programs related to public awareness and promoted use of evidence-based interventions.

### Required Resources

- **Staff:** 0.25 FTE for a state DPCP coordinator and 0.15 FTE or more for a local facilitator. The actual work of the coalition involved many hours of volunteer staff time.
- **Funding:** The KDPCP has made approximately 30 mini-grants of \$1,000–\$4,000 available for Diabetes Today coalitions since 1998. Coalition member organizations were asked to contribute cash or in-kind services to match or exceed requested grant funds. Many of the community groups applied for additional grants, did their own fundraising, and/or had obtained 501(c)(3) status so they can receive donations from other organizations and individuals. Individual

coalitions determined their own budget depending on the cost of interventions implemented and collectively have reported leveraging cash or in-kind services valued at more than \$1,597,961 in the past four years.

- **Other:** Diabetes Today training at the state or national level for facilitators, a Web-based electronic planning and reporting system, and materials for conducting the local Diabetes Today launch.

## Implementation Challenges

- Implementation was very labor and time intensive, and facilitators had other duties, which competed for their time.
- Lack of expert staff with strong group facilitation and community organization skills resulted in poor coordination and management of Diabetes Today efforts.
- Turnover of staff within partner organizations kept efforts from moving forward at a steady pace.
- Evaluation of community initiatives was difficult to track or to establish a cause and effect relationship between coalition activities and changes in the community.

## Implementation and Maintenance Tips

The KDPCP offered tips for successful implementation and maintenance of a Diabetes Today Program:

- **Coordinate/partner with similar efforts.** The DPCP explored ways to coordinate and/or collaborate with other health promotion or chronic disease state or community efforts such as Healthy Communities, Smoke-Free Community Coalitions, etc.
- **Recruit effective leaders.** The DPCP indicated desirability in lay leaders of many or all of: strong group facilitation skills; a member of the community of focus; established and trusted relationships with community members; diabetes expertise; enthusiastic; committed to issue; good organizational skills; and the ability to create vision. They also recommended focusing recruitment efforts to identify individuals with one or more of the characteristics in the following five Ps: passion for the issue, perseverance, power, personal touch, and professional interest.
- **Establish an efficient coalition structure.** Together stakeholders used the Diabetes Today model to establish a written mission statement, an action plan as well as member roles and expectations. The DPCP recommended using an agenda to keep meetings focused, mobilizing leadership from within the group, creating clear ground rules or bylaws, and considering officers, committees, board of directors and/or nonprofit incorporation.
- **Leverage resources from a variety of sources.** Community partners shared costs, contributed in-kind services, sought contributions from community businesses/civic groups, and tapped into existing networks or available grants for resources. The DPCP noted that one should recognize all in-kind or cash contributions.
- **Engage stakeholders.** Maintaining an effective communication system among coalition partners was important. For example, the DPCP provided information about upcoming meetings, sent reminders a couple days before events, provided summaries following meetings, established new member orientation, and surveyed members periodically as an opportunity for them to communicate what works and what needs improvement.
- **Develop a climate of mutual respect and value.** The DPCP provided encouragement, conveyed value and acceptance, used time wisely, did not overextend willing volunteers, found ways to recognize and thank members, and provided rewards for officers and committee chairs or individuals in lead positions.

- **Develop a local identity.** The DPCP recommended developing a coalition logo, distinct letterhead/stationery, envelopes, business cards, a coalition display, and brochure, as well as seeking frequent media coverage and consider publishing a newsletter.



## Evaluation Approach

KDPCP collected evaluation questions and measures from coalitions. Most of these were self-reported by coalition members and focused on process and community- or system-level outcomes. These community-level indicators were improvements that helped create a community of support for healthy choices and were early markers of more distal health outcomes. Examples of process evaluation questions included number and type of coalition members, level of participation of coalition members, whether objectives in community diabetes plan were being achieved, and changes in behavior/activities of partner organizations.

The KDPCP used CATALYST, a web-based planning and reporting system, to collect and track work plans, intervention results, and most of the evaluation measures outlined in the proceeding table related to diabetes prevention and control for the state and local coalitions. Survey data, participant lists, meeting summaries, and hard or electronic copies of some intervention materials were collected by the KDPCP outside the CATALYST system. A constituent survey of outcomes has not been administered to date.

## Evaluation Lessons Learned

- It was challenging and resource intensive to evaluate the work and related health communication efforts for individual coalitions and even more so for all coalitions collectively.
- Evaluation information empowered community partnerships to further develop themselves and support improvement.
- They encouraged coalitions to measure progress and achievements annually. An anniversary or birthday celebration for the partnership and/or ways to recognize active members was one strategy. They sought media coverage to highlight successful events and accomplishments.

### Key Program Achievements

#### Process Outcomes

- 45 active coalitions, some sustained for more than 15 years
- Participation by a diverse group of organizations and individuals from the community (~800)
- 35 coalitions (including KDN) completed coalition effectiveness inventories and developed improvement plans in Fiscal Year 2011
- Mobilization of \$1,597,961 in cash and in-kind resources in partnership efforts during past 4 years (2009–2012)
- More than 188.4 million public awareness message exposures during past 4 years (2009–2012)





## Related References, Resources, and Tools

- Butterfoss, F. D. (2009). *Coalitions and partnerships in community health*. San Francisco, CA: Jossey-Bass.
- Butterfoss, F. D. (1998). *Coalition effectiveness inventory*. Center for Pediatric research; Center for Health Promotion, South Carolina DHEC.
- Coalitions Work Website: <http://coalitionswork.com/>
- Diabetes Today Website: [http://www.cdc.gov/diabetes/projects/d\\_today.htm](http://www.cdc.gov/diabetes/projects/d_today.htm) or [http://www.dttac.org/diabetes\\_today/index.html](http://www.dttac.org/diabetes_today/index.html)
- Healthy Communities Website: <http://www.cdc.gov/healthycommunitiesprogram/overview/index.htm>
- The Community Toolbox Website: <http://ctb.ku.edu/en/default.aspx>
- U.S. Department of Health and Human Services. *Evaluating Community Efforts to Prevent Cardiovascular Diseases*. 1995.

# NORTH CAROLINA DIABETES TODAY PROGRAM



The Diabetes Today Program was initiated in North Carolina in 1994 and remains an integral part of the Diabetes Prevention and Control Program's (DPCP's) work with African Americans and Native Americans in multiple parts of the state. The Diabetes Today curriculum served as a guide for engaging and mobilizing community members, health care professionals, and community institutions around diabetes prevention and control through local coalitions. Diabetes Today coalitions conducted community outreach, education, and awareness activities.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.7
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	As a complement to work occurring under strategies 2.1-2.6, promote health communication campaigns or coalition initiatives that will contribute to increasing access to sustainable self-management education and support services for people with diabetes.



## Program Planning, Start-Up, and Growth

The Diabetes Today Program began in 1994 with a focus on working with Native Americans and African Americans. In 2003, the focus shifted to mobilizing the community around environmental and policy change. In 2004, the DPCP implemented a regional approach to community mobilization in which the local health departments work with partners in surrounding counties in the region. Currently, there are four active coalitions: three coalitions are led by local health departments, and the fourth coalition involves the Eastern Band of Cherokee tribe.

### Program Timeline:

2006	2007	2008
<ul style="list-style-type: none"> <li>Program initiated</li> </ul>	<ul style="list-style-type: none"> <li>Focus shifted to mobilizing the community around environmental and policy change</li> </ul>	<ul style="list-style-type: none"> <li>Regional approach implemented</li> </ul>

**Key Stakeholders:** Local health departments, NC Community Care (Medicaid and Managed Care), Division of Indian Affairs, El Centro Hispano

**Target Population:** Diabetes Today has reached some of the state's most vulnerable populations at risk for diabetes. Specifically, the program aimed to increase access to health care services for Medicaid and uninsured populations and to address health disparities among African Americans, Native Americans, and Hispanics with type 2 diabetes.



## Implementation

### Key Program Components

- The Diabetes Today training curriculum served as a guide for local coalitions to engage with and mobilize community members, health professionals, and community institutions in preventing and responding to diabetes.
- Coalitions implemented various diabetes prevention and control initiatives, including the Chronic Disease Self-Management Program; provider training on topics related to diabetes; dissemination of National Diabetes Education Program materials; support for walking groups, and lay leader training for people with diabetes; referrals to local resources (free clinics and Federally Qualified Health Centers) for people with diabetes; and assistance to community groups advocating for environmental changes to encourage healthy behaviors (e.g., creation of walking trails).
- The DPCP expanded their approach to the regional level with support from local health departments. Local health departments supported coalitions by providing meeting spaces, providing mini-grants, and offering technical assistance on program planning and evaluation in conjunction with the state staff.

### Required Resources

- **Staff:** 1 FTE at the state level for progress monitoring; approximately 0.25 FTE for the local health department level.
- **Funding:** The DPCP funded three local health departments and the Eastern Band of Cherokee with awards totaling \$120,000 (up to \$30,000 each) given directly to the local health departments.
- **Other:** Technical support for progress monitoring; supplies and materials; meeting space for training/planning meetings/town hall type meetings; cost of incentives to support coalition activities (e.g., community lay exercise leader trainings) when applicable.

### Implementation Challenges

- Some community-based organizations (CBOs) were not always able to provide appropriate financial documentation. For example, some CBOs did not provide IRS documentation, or there were delays in receiving invoices or inaccuracies in how sub-contracts were paid. Additionally, it was not always clear if funds were going to their intended purposes. To overcome these funding challenges, the DPCP gave Diabetes Today awards to local health departments, which partner with community-based organizations to implement the program.
- The DPCP also noted that there was a lack of evidence-based activities that were specific to diabetes, rather than general health promotion, for CBOs to work on. Health fairs and screening built partnerships in the communities, but they did not have an evidence base to demonstrate changes in diabetes prevention and control.

### Implementation and Maintenance Tips

The Diabetes Today Program offered several tips for successful implementation and maintenance of a health promotion and awareness program, including the following:

- **Focus on effective strategies.** Rather than giving coalitions a long menu of intervention options from which to choose, the DPCP found that it worked better to give guidance on effective, targeted strategies for addressing specific public health problems experienced by the populations in need.
- **Tailor materials for target populations.** The DPCP found that effective curricula and associated materials must be adapted for use with target populations.
- **Require reporting about training materials.** The DPCP recommended requiring coalitions to report what products/materials they use for training interventions (e.g., National Diabetes Education Program Guide).
- **Encourage planning for sustainability.** To ensure that Diabetes Today initiatives will continue even after the funding stream ends, they asked coalitions to develop a sustainability plan.



## Evaluation Approach

To evaluate the Diabetes Today Program, the DPCP used a “progress check system” in which coalitions had to report on news articles published, partnerships created, programs started, and resources generated. The DPCP hopes to implement a new system that will make it easier to track coalition efforts.

## Evaluation Lessons Learned

- Identify sufficient resources for progress monitoring. It is necessary to have dedicated funds and staff to support progress monitoring; this may be in addition to an evaluator who focuses on assessing program improvement needs and outcomes of the Diabetes Today Program as a whole.
- Standardize reporting. The lack of uniform progress and performance reporting among local health departments made monitoring difficult.

### Key Program Achievements

#### Process Outcomes

- 86 out of 100 NC counties with Diabetes Today Program implemented



## Related References, Resources, and Tools

- North Carolina Diabetes Prevention and Control Strategic Plan 2005–2010:  
[http://www.ncdiabetes.org/library/\\_pdf/StatePlan.pdf](http://www.ncdiabetes.org/library/_pdf/StatePlan.pdf)

# NORTH CAROLINA DIABETES ADVISORY COUNCIL'S ADVOCACY AND LEGISLATIVE ISSUES TASK FORCE



The North Carolina Diabetes Prevention and Control Program (DPCP) provided administrative support and information to the NC Diabetes Advisory Council's Advocacy and Legislative Issues Task Force (the Task Force), which worked to create awareness among decision- and policy-makers of the burden of diabetes, determined the need to enact legislation or policies to enhance self-management of diabetes, and worked to ensure all payor plans provide comprehensive coverage of diabetes care.

Core Diabetes Intervention #2	Core Diabetes Strategy 2.2
Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.	Support efforts to promote the sustainability of DSME/T or CDSM programs (e.g., Medicaid reimbursement for DSME/T or CDSM programs, bundled reimbursement).



## Program Planning, Start-Up, and Growth

The DPCP was initially funded in 1988; by 1989, it had established an advisory committee to work on diabetes issues in Northeastern NC, the area of the state that had the heaviest burden. In 1994, the committee expanded their focus to statewide activities and became the NC Diabetes Advisory Council. Initially, there was a Leadership, Advocacy and Resource Development Task Force, which was renamed the Advocacy and Legislative Issues Task Force in June 2000. The Task Force was dedicated to working on diabetes issues that can be advanced through policy and systems change. The DPCP's main roles were to support the Task Force administratively and to provide the Task Force with research and information about diabetes.

One of the first issues around which the Task Force members organized was House Bill 5, which added insurance coverage for diabetes care in 1997. The Advisory Council provided education to the General Assembly on the benefits of self-monitoring and self-management education in relation to SL 1997-225, which assures coverage for diabetes supplies and self-management education training (SME/T) for people with diabetes under private insurance. The Task Force went on to provide education about SL 2002-103, which is designed to support children managing diabetes at school. The Task Force also organized two Diabetes Days at the General Assembly to educate legislators about important diabetes issues. Most recently, the General Assembly passed SL 2009-563, which required charter schools to abide by the 2002 legislation to support children with diabetes at school and requiring annual data reporting by all public schools.

### Program Timeline:

1994	1997	2000	2002	2006	2008	2010
• NC Diabetes Advisory Council convened	• SL 1997-225 passed, providing insurance coverage of diabetes supplies and DSME/T	• Advocacy and Legislative Issues Task Force convened	• SL 2002-103 passed (Care for School Children with Diabetes Act)	• First Diabetes Day at General Assembly	• Second and final Diabetes Day at General Assembly	• SL 2009-563 approved, requiring charter schools to abide by SL 2002-103

**Key Stakeholders:** Groups represented in the Task Force, such as school nurses, Department of Public Instruction, parents of children with diabetes, American Diabetes Association, and JDRF.

**Target Population:** Adults with Diabetes.

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## Implementation

### Key Program Components

- The DPCP acted as the administrative coordinator for the Task Force and convened monthly meetings.
- DPCP staff sent out meeting notices, took minutes at meetings, and researched questions of interest for the Task Force.
- The DPCP coordinator researched issues at the request of the Diabetes Advisory Council. For example, the Advisory Council needed to know how many Diabetes Advisory Councils were legislatively mandated, so the DPCP coordinator followed up with CDC to find this information.
- DPCP staff did not communicate with legislators directly or engage in advocacy.

### Required Resources

- **Staff:** 0.2 FTE DPCP Coordinator
- **Funding:** No specific DPCP funds were dedicated to the Task Force. CDC funds have been used to reimburse some travel costs for Task Force members in distant parts of the state to attend meetings. Private donations were used to fund the Diabetes Day at the state legislature put on by the Task Force.
- **Other:** Space for Task Force meetings; informational materials for Task Force.

### Implementation Challenges

- Working on political issues took a savvy coordinator who can communicate effectively without ruffling feathers.
- Although much of the work was done by the Task Force, the DPCP coordinator spent time coordinating activities, answering questions, and communicating with the individual Task Force members.

### Implementation and Maintenance Tips

The DPCP offered a tip for successful implementation and maintenance:

- **Recruit passionate task force members.** The DPCP included enthusiastic members on their Task Force, particularly people with diabetes who are interested in making changes at the population level. The level of enthusiasm was important to accomplishing anything in a Task Force of volunteers.



## Evaluation Approach

To evaluate both public and charter school compliance with the policy designed to support children managing diabetes at school (SL 2002-103), the DPCP developed additional survey questions in cooperation with the State Board of Education. Working collaboratively with the School Health Unit in the Division of Public Health and the State and Regional School Nurse Consultants, four questions were added to the Annual School Health Services Survey. All local education agencies and charter schools were notified by the Division of Public Health and the Department of Public Instruction about the new diabetes data collection requirement and encouraged to participate in the Annual School Health Services Survey. Regional school nurse consultants worked with school nurses to improve the response rate.

### Evaluation Lessons Learned

- Maintaining sufficient capacity to conduct evaluation was important. The DPCP noted that if the DPCP coordinator is overwhelmed with Task Force efforts, include other staff to handle evaluation.

#### Key Program Achievements

##### Process Outcomes

Local education agencies reported on compliance to SL 2002-103 in 2012:

- Public, non-charter local school agencies increased compliance with major requirements from 95% to 96%
- Charter schools decreased compliance with major requirements from 80% to 75%



## Related References, Resources, and Tools

- Diabetes Advisory Council Website: <http://www.ncdiabetes.org/diabetesAdvisory/index.aspx>



## CORE INTERVENTION #3



**Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.**



# WASHINGTON YMCA

## DIABETES PREVENTION PROGRAM



The Washington Diabetes Prevention and Control Program (DPCP) funded YMCAs (the Y) to implement the Diabetes Prevention Program's lifestyle change curricula. The DPCP also provided technical assistance to YMCA partners, including quarterly conference calls to monitor implementation progress and guidance on recruitment and referral strategies. With support from the DPCP, YMCAs partnered with regional diabetes coalitions and diabetes education programs to market the Diabetes Prevention Program (DPP).

Core Diabetes Intervention #3	Core Diabetes Strategy 3.1
Increase access to sustainable, evidence-based lifestyle interventions to prevent or delay onset of type 2 diabetes among people at high risk.	Increase access/availability and use of the CDC-recognized lifestyle change program in YMCAs, worksites, and other settings as an intervention targeting populations at high risk for type 2 diabetes (including but not limited to women with previously diagnosed gestational diabetes).



### Program Planning, Start-Up, and Growth

In 2009, the DPCP established contracts with four YMCAs, each with 1 to 12 branches, to implement the YMCA-USA DPP. Partnering YMCAs were selected based on their readiness to implement the 16-week DPP curriculum with fidelity to the YMCA-USA model. The DPCP set a goal of 120 DPP participants across the four YMCAs in the first year of the program. With funding from the DPCP, staff from partnering YMCAs completed requirements to become YMCA-USA lifestyle coaches. The DPCP obtained Institutional Review Board (IRB) approval to collect biometric data from DPP participants, including blood pressure, weight, and minutes of physical activity.

#### Program Timeline:

2009	2010	2011	2012
<ul style="list-style-type: none"> <li>Established contracts with 4 YMCAs</li> <li>YMCA staff became YMCA-USA lifestyle coaches</li> </ul>	<ul style="list-style-type: none"> <li>YMCA associations implemented DPP</li> <li>IRB approval obtained</li> <li>DPP biometric data collected</li> </ul>	<ul style="list-style-type: none"> <li>2 Washington State YMCAs moved into the YMCA-USA program and were funded by that program</li> </ul>	<ul style="list-style-type: none"> <li>Remaining 2 Washington State YMCAs supported by DPCP moved into the YMCA-USA program and were funded by that program</li> </ul>

**Key Stakeholders:** YMCAs, regional diabetes coalitions and diabetes education programs, and CDC staff working on the National Diabetes Prevention Program.

**Target Population:** Persons at high risk for developing type 2 diabetes in the communities served by the four funded YMCA associations.



## Implementation

### Key Program Components

- The DPCP funded four partnering YMCAs to implement YMCA-USA lifestyle change curricula.
- The DPCP provided partnering YMCAs with technical assistance to meet the requirements for establishing a YMCA-USA DPP. The YMCAs participated in quarterly conference calls led by the DPCP and received assistance from the DPCP with DPP recruitment and referrals, as well as evaluation and reporting of participant data.
- The DPP was marketed, and participants were recruited through each YMCA's membership base, as well as through regional diabetes coalitions and diabetes education programs. Some YMCAs had existing relationships with area clinics and providers, which provided referrals to the program.
- Participant eligibility for the program was confirmed through the American Diabetes Association's Diabetes Risk Test to assess risk for type 2 diabetes or diagnosis of prediabetes by a provider.

### Required Resources

- **Staff:** One .67 FTE highly experienced staff member and 0.33 in additional program support, as well as part-time evaluation support from epidemiologist.
- **Funding:** Approximately \$12,500 per year for each YMCA.

### Implementation Challenges

- The IRB process resulted in a very technical informed consent process that the DPCP reports was intimidating and confusing for some DPP participants. Additionally, data collection did not begin until about the third DPP class because of the time required to obtain IRB approval.
- All DPP sites experienced some initial recruitment challenges. The DPCP believed recruitment challenges were due in part to the lack of public and provider awareness about diabetes prevention.
- YMCA master trainers could train only staff from YMCAs that were part of the YMCA-USA DPP. YMCAs were required to adopt the program and apply to the YMCA-USA DPP, and not all YMCAs in the state committed to offering the YMCA-USA DPP. The DPCP is currently focusing on expanding the DPP in organizations outside of YMCAs, in places or populations where other organizations are the best match. YMCA-USA DPP and CDC's DPP Recognition Program each provided their own training, so separate trainings were necessary for YMCAs and other organizations.

### Implementation and Maintenance Tips

The Washington DPCP offered several tips for successful implementation and maintenance of a DPP intervention, including the following:

- **Partner strategically.** The DPCP recommended assessing YMCA readiness for DPP recruitment and implementation of the 16-week curriculum with fidelity when selecting organizations to fund.
- **Develop a marketing and recruitment plan.** YMCAs varied in their marketing and recruitment capacity; the DPCP recommended assisting YMCAs by connecting them with regional coalitions or other partners that provide referrals or help raise awareness of diabetes prevention programs.

- **Request national-level support.** The DPCP requested assistance from YMCA-USA and CDC experts, as needed, to develop a better understanding of reporting and/or recognition requirements. They recommended keeping informed of national-level advancements, such as the roll-out of CDC's Diabetes Prevention Recognition Program, which may provide additional training options for community partners looking to implement diabetes prevention programs.
- **Plan for sustainability.** The DPCP recommended considering ways in which changes to health insurers' reimbursement policies may provide funding to sustain diabetes prevention programs, and keeping implementation partners informed of reimbursement opportunities for DPP.



## Evaluation Approach

Surveys and structured interviews were conducted as part of a formative evaluation of Washington's efforts to implement the YMCA-USA DPP model. The outcome evaluation included an assessment of training effectiveness based on pre- and post-course evaluation forms that were completed by DPP participants. Outcome evaluation included evaluating changes in aggregate cohort biometrics, including blood pressure and weight measurements.

## Evaluation Lessons Learned

- If IRB approval is required, the DPCP recommended planning enough time for the review process so data collection can start at the first DPP class.
- The DPCP also noted that YMCA DPP trainers may not have experience collecting data. The DPCP provided technical assistance around data collection methods, including the timing of data collection.
- The DPCP used readily available data from course materials (e.g., weekly weight and physical activity trackers filled out by participants).

### Key Program Achievements

#### Process Outcomes

- 4 YMCAs; 99 DPP participants agreed to provide evaluation information in 2010

#### Diabetes Care Outcomes

- 78% of respondents reported they had achieved their personal goals during the program: 83% were successful in changing their eating habits, 79% improved their level of physical activity, and 57% achieved their weight loss goal

#### Health Outcomes

- 51% of DPP participants lost a minimum of 5% of their starting weight
- The average decrease in systolic blood pressure among participants during the program was 7 mmHg



## Related References, Resources, and Tools

- Washington Diabetes Prevention Program Website: <http://diabetes.doh.wa.gov/ymca-plan-forward-diabetes-prevention-program>
- CDC National Diabetes Prevention Program Website: <http://www.cdc.gov/diabetes/prevention/>

# MINNESOTA I CAN PREVENT DIABETES PROGRAM



The Minnesota Diabetes Program (MDP) implemented the I CAN Prevent Diabetes (I CAN PD) program, an evidence-based program following the CDC National Diabetes Prevention Program (NDPP) curriculum to help delay or prevent the development of diabetes in at-risk adults. I CAN PD was similar to behavior modification and lifestyle change programs associated with the NDPP but because it was delivered to groups in either clinic or community settings, I CAN PD was implemented at a fraction of the cost (\$200 to \$400 per person) of similar programs. The MDP supported the program by building capacity among community organizations through partnership development, training, and evaluation.

Core Diabetes Intervention #3	Core Diabetes Strategy 3.1
Increase access to sustainable evidence-based lifestyle interventions to prevent or delay onset of type 2 diabetes among people high at risk.	Increase access/availability and use of the CDC-recognized lifestyle change program in YMCAs, worksites, and other settings as an intervention targeting populations at high risk for type 2 diabetes (including but not limited to women with previously diagnosed gestational diabetes).



## Program Planning, Start-Up, and Growth

I CAN PD grew out of the MDP's work on a CDC-funded diabetes primary prevention initiative that focused on systems thinking, surveillance, and intervention. In 2007, the MDP and its partners formed a plan to conduct a diabetes lifestyle intervention with YMCAs (the Y) and community programs involved in Minnesota's CDC-funded Steps to a Healthier Minnesota program. Four Steps communities were selected and the local public health departments convened a partnership with the MDP and local YMCAs, other community organizations, and primary care clinics. Since the first facilitator training in December 2007, MDP has coordinated trainings for certified lifestyle coaches using consultant Master Trainers, conducted logistics trainings to help with recruitment and clinic referrals, and offered ongoing technical assistance to sites.

To reduce program costs, in 2009 two Master Trainers began training other lifestyle coaches to implement the program in Minnesota communities and clinics. Despite elimination of funding for Steps to a Healthier Minnesota in 2009, lifestyle coaches continued to be trained. The original certified Master Trainers continued to lead coach trainings in Minnesota as part of CDC's Diabetes Training and Technical Assistance Center. I CAN PD expanded implementation to other institutions such as clinics, extension service agencies, and other community-based organizations, improving its capability to reach more diverse racial and ethnic groups and underserved populations.

### Program Timeline:

2005	2007	2008	2009	2010	2012
<ul style="list-style-type: none"> <li>CDC funded Minnesota to develop and implement a framework for state-level primary prevention programs</li> </ul>	<ul style="list-style-type: none"> <li>Three community partnerships recruited through local public health departments</li> <li>First training of facilitators/coaches</li> </ul>	<ul style="list-style-type: none"> <li>Minneapolis local public health department added as an additional site</li> </ul>	<ul style="list-style-type: none"> <li>Master trainers selected to train the trainer. Additional sites recruited</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of program beyond Steps communities to primarily non-urban areas</li> </ul>	<ul style="list-style-type: none"> <li>Continued expansion to rural MN through clinics and University of MN Extension programs and to Latino, African American, and Somali populations</li> </ul>

**Key Stakeholders:** Minnesota Diabetes Steering Committee, Minnesota Diabetes Program, Steps to a Healthier Minnesota, local public health departments, local YMCA branches (Willmar, Rochester, Minneapolis, St. Paul, and later St. Cloud), local clinics (Willmar, Rochester, Minneapolis, St. Paul), federally qualified health centers, Skyway Senior Center, Sabathani Community Center, Clearwater County Nursing Service, American Indian Communities, University of MN Extension Simply Good Eating Program, faith communities and health leaders in faith communities, community organizations working in Latino, Somali, and African American communities, 2012 Collective Impact organizations working on diabetes and diabetes prevention, and public health task forces making recommendations to legislative teams.

**Target Population:** Persons with prediabetes, with special emphasis on underserved populations and others at risk for diabetes including, but not limited to, racial/ethnic minority populations, immigrants, those with a history of gestational diabetes, and rural and low-income populations.



## Implementation

### Key Program Components

- The MDP recruited organizations to implement I CAN PD in their communities, organized training, and contracted with Master Trainers who conducted 16-hour lifestyle coach training sessions and 8 monthly post-core sessions for organizational members using a standardized NDPP curriculum.
- The MDP organized and led the I CAN PD logistics training session for coaches and program coordinators that helped them develop a recruitment, screening, provider referral, and marketing plan.
- The MDP provided technical assistance to community-based organizations on program implementation, monitoring, and evaluation, and fosters coordinated partnerships among public health departments, clinics, and community organizations, including YMCAs now involved in the Y-USA Diabetes Prevention Program.
- Local public health departments also coordinated local teams, developed recruitment strategies, and coordinated communications among community-based organizations.
- Local clinics and providers referred qualified patients to the program, encouraged patients to attend, provided follow-up care and encouragement, and tracked patient clinical status.
- Local YMCAs and other community organizations or faith communities offered I CAN Prevent Diabetes or Y-USA DPP programs.

### Required Resources

- **Staff:** 1.0 FTE located in the MDP. Stipend provided to each master trainer for lifestyle coach trainings. Participants in the lifestyle coach training paid registration fee to cover training expenses.
- **Funding:** The overall cost to deliver the year-long program in Minnesota was \$200 to \$400 per person. Community organizations charged between \$0 and \$200 per person. MDP program funds covered staff time to provide technical assistance, training coordination, partial training costs, such as a portion of the master trainer stipends, and a limited number of partial scholarships (usually \$150 per person) to attend the lifestyle coach training. Each local organization printed the participant curriculum and provided tools for its own program. Direct funding

sources have included the CDC DDT (through the MDP), the CDC-funded Steps to a Healthier Minnesota, and the Medicare Diabetes Screening Project (Novonordisk), which provided recruitment materials and supported part of the costs for one of the lifestyle coach trainings. Local organizations received grant funding from Medica Foundation, UCare (insurer), and the Minnesota State Health Improvement Program (SHIP) to help defray costs to implement the program.

- **Other:** Lifestyle coach training registration fees covered meeting space, food for training sessions, and most of the coach's materials and tool kit costs.

## Implementation Challenges

- Recruiting participants with a prediabetes diagnosis was difficult due to the lack of awareness of prediabetes and the need for a provider referral that included a blood glucose test.
- Ensuring that programs met the CDC criteria for recognition and helped participants achieve weight loss targets was difficult.
- Although the MDP had partnerships with the YMCA, American Indian and other NDPP sites in Minnesota (all which report their results to their own national organizations), the DPCP lacked a unified report of the positive impact of their work in Minnesota, and thus potentially missed the opportunity to make the NDPP a permanent fixture in the state.

## Implementation and Maintenance Tips

The MDP provided several tips for successful program implementation and maintenance, including:

- **Understand cultural needs.** When working with diverse populations, it was important to understand cultural needs before putting a program in place. For example, representatives of the Hmong community mentioned a lack of interest in typical recreational activities such as biking and running. Adapting the program to include other forms of physical activity, such as gardening, made the program more acceptable to this population. Additionally, for a population with a strong oral tradition, using direct, personal communication from a trustworthy source was more effective than flyers or other written communication approaches for recruitment and to support individual session activities. Finally, cultural beliefs for populations that have experienced famine made it difficult for them to want to lose weight, even to prevent diabetes. Focusing on positive aspects of being physically active and preparing foods with less fat showed promise. A visual food tracker based on MyPlate might be useful for preliterate immigrant populations.
- **Consider program location.** Programs in clinics were better able to refer, track, and retain participants.
- **Use local marketing.** Although the MDP offered training and materials for recruiting participants, the most successful recruitment strategies were generated by local programs because these activities are better tailored to the community context. For example, rural communities had a strong local media that supported referrals. In urban areas, African American churches engaged their pastors and health coordinators to promote the program, recruit participants, and lead the NDPP in their church.
- **Broaden application to chronic disease prevention and control.** The program was offered along with other chronic disease programs to broaden reach. For example, one I CAN PD program was implemented through a cardiovascular rehabilitation program. I CAN PD also has been supported by other chronic disease initiatives, such as the Minnesota State Health Improvement Program (SHIP) and Community Transformation Grants, which have the same objective of linking clinics and community services.



## Evaluation Approach

The evaluation of Minnesota's I Can PD program was conducted by the MDP and focused primarily on weight change and attendance. Data reported in 2012 in the diabetes educators practice group publication, *On the Cutting Edge*, highlights the number of organizations implementing I CAN PD, the number of participants, and the impact of complete attendance on weight change. MDP also has assessed changes in diabetes-related knowledge, attitudes, and behaviors of master trainers post-training for DDT conferences.

## Evaluation Lessons Learned

- Because of time and travel costs, the MDP state coordinator was unable to conduct quality control checks to determine whether the program is delivered according to program requirements. As a result, variability in program delivery was possible. The DPCP noted that program standards are easier to communicate and appear to be followed more routinely now that CDC has established the NDPP and has nationally recognized the program in 2012. The expectations and goals were clearly stated on the CDC Website.

### Key Program Achievements

#### Process Outcomes

Since 2008:

- Over 850 participants from 22 organizations in 24 cities have registered in I CAN PD
- Over 200 certified lifestyle coaches have been trained in delivering I CAN PD, including many bilingual Spanish, Hmong, and Somali individuals

#### Health Outcomes

Results from 2008 to 2010 showed (N=224 participants):

- 49% lost at least 5% of their original weight
- 1% lost at least 7% of their weight



## Related References, Resources, and Tools

- Minnesota Department of Health, Health Promotion and Chronic Disease Division, Center for Health Promotion Diabetes Program Website: [www.health.state.mn.us/diabetes/](http://www.health.state.mn.us/diabetes/)
- Mays, R. A. (2012 July). I CAN Prevent Diabetes (Individual and Communities Acting Now to Prevent Diabetes): Strategies to Help Prevent Type 2 Diabetes in Minnesota. *On the Cutting Edge*, Diabetes Educator's Practice Group of the Association of Nutrition and Dietetics (American Dietetic Association): [www.icanpreventdiabetes.org](http://www.icanpreventdiabetes.org)



# MONTANA CARDIOVASCULAR DISEASE AND DIABETES PREVENTION PROGRAM



The Montana Cardiovascular Disease and Diabetes Prevention Program is a group-based lifestyle intervention program adapted from the Diabetes Prevention Program (DPP), implemented in person at 15 sites and via telehealth technology at six remote rural sites. The Montana Diabetes Prevention and Control Program (DPCP) designed the program and secured the original funding, recruited and provided funds to the sites, provided training and technical assistance to the lifestyle coaches, and conducted evaluation of the program.

Core Diabetes Intervention #3	Core Diabetes Strategy 3.1	Core Diabetes Strategy 3.2
Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.	Lead/coordinate CDC-approved health communication and marketing campaigns or coalition initiatives that raise awareness of the following among <i>people at high risk</i> : <ul style="list-style-type: none"> <li>• prediabetes risk factors,</li> <li>• the location of sites offering lifestyle change programs that have achieved CDC recognition (or pending recognition), and</li> <li>• how to enroll in these lifestyle change programs.</li> </ul>	Work with health care providers to do the following: <ul style="list-style-type: none"> <li>• raise awareness of how to recognize and treat prediabetes, and</li> <li>• implement systems for referral of people with prediabetes or multiple type 2 diabetes risk factors to sites offering lifestyle change programs that have achieved CDC recognition (or pending recognition).</li> </ul>



## Program Planning, Start-Up, and Growth

In 2007, the DPCP initiated the implementation of a statewide evidence-based lifestyle change program adapted from the DPP and the Healthy Native Community Partnership's adaptation of the DPP curriculum. The Department of Public Health & Human Services (DPHHS) Public Health & Safety Division received funding from the State of Montana to develop and implement the program. The DPCP issued a request for proposals (RFP) for sites to deliver the lifestyle intervention in 2007; the DPCP reviewed 16 proposals and made awards to four sites. The original sites were hospitals with associated American Diabetes Association-recognized diabetes self-management education/training (DSME/T) programs; hence, they had the capacity and expertise to deliver the DPP lifestyle change intervention. Two consultants from the DPP site on an Arizona Navajo reservation provided technical assistance to the DPCP and trained the original group of lifestyle coaches.

The DPCP issued a second RFP in 2008, and four additional sites began interventions in 2009. Holy Rosary Healthcare in Miles City also hosted one telehealth pilot site in 2009 and has since delivered the intervention to six remote rural communities via telehealth. Currently, 15 sites delivered the program in person. In addition to hospitals, current sites included a clinic and a local health department.

### Program Timeline:

2007	2008	2009	2010	2011	2012
<ul style="list-style-type: none"> <li>• RFP issued by DPCP and awarded to 4 sites</li> </ul>	<ul style="list-style-type: none"> <li>• Initial 4 sites began interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Second group of 4 sites selected by RFP began interventions</li> <li>• Telehealth pilot began at 1 site</li> </ul>	<ul style="list-style-type: none"> <li>• Software for data collection (PPS) developed and implemented</li> <li>• Telehealth expanded to 3 sites</li> </ul>	<ul style="list-style-type: none"> <li>• Third group of 6 sites selected by RFP began interventions</li> <li>• Telehealth expanded to 4 sites</li> </ul>	<ul style="list-style-type: none"> <li>• Fourth addition of 1 site selected by RFP began intervention</li> <li>• Telehealth expanded to 6 total sites</li> </ul>

**Key Stakeholders:** Montana Diabetes Advisory Coalition, Montana Cardiovascular Health Program, DSME/T Programs in Montana, and other health-related funders

**Target Population:** Overweight adults at high risk for cardiovascular disease or type 2 diabetes.



## Implementation

### Key Program Components

#### Sites

- The DPCP recruited sites via four competitive grant cycles, provided funding to the sites, provided training and technical assistance to the lifestyle coaches, managed data collection, and conducted evaluation of the program.
- The four initial sites received \$90,000 per year (minimum recruitment and enrollment goal of 125 participants per site) and newer sites received \$25,000 per year (minimum recruitment and enrollment goal of 40 participants per site). The site that delivered the program via telehealth received additional funding when available.
- Telehealth sites increased access to rural and frontier populations. The intervention was delivered to an on-site group at an existing site and simultaneously through video conferencing to other group(s) in a remote community. In lieu of structured physical activity events, telehealth participants were referred to local resources (e.g., recreation centers).
- Intervention sites were staffed by a 0.25 to 1.0 full-time equivalent (FTE) lifestyle coach, normally a shared position between a nurse, dietitian, and/or a health professional with training in exercise sciences, and one 0.10 to 0.50 FTE support staff for administration and data entry. The amount of time needed depended on the annual recruitment and enrollment goal.
- Staff from all sites convened on a monthly conference call to network and share challenges and solutions.
- Sites participate in the Diabetes Prevention Recognition Program; currently 12 sites have received pending recognition.

#### Implementation

- The DPP goals for participants were a 7% weight loss and at least 150 minutes of moderate physical activity per week.
- The curriculum consisted of 16 weekly 1-hour core sessions delivered in a group format, self-monitoring of diet and physical activity, and weekly structured physical activity events, followed by 6 monthly 1-hour sessions following the 16 core sessions.
- Eligible participants were 18 years or older, overweight or obese (body mass index [BMI]  $\geq 25$  kg/m<sup>2</sup>), and had at least one risk factor for type 2 diabetes or cardiovascular disease, including a diagnosis of prediabetes, impaired glucose tolerance, impaired fasting glucose, gestational diabetes mellitus, gave birth to a baby  $> 9$  pounds, hypertension, or dyslipidemia. Readiness to change physical activity and dietary intake was also an eligibility criterion and was measured using questions from motivational interviewing instruments. 52% of the 293 participants who completed the Year 1 lifestyle change program had a diagnosis of prediabetes.
- Recruitment of participants took place through: referrals from physician offices; paid and earned media (e.g., newspaper advertisements, press releases); employers, churches, work sites, and

service groups; and word of mouth. All participants must provide an eligibility and medical clearance form from their primary care provider.

- The cost to participants ranged from no cost to \$350. The median fee was \$100. Scholarships were offered to participants who could not afford the fee.

## Data Collection

- The DPCP collected evaluation data from each site using the Primary Prevention Software (PPS) to standardize data collection. The DPCP also generated data reports for sites and provided feedback about their outcomes.

## Required Resources

- **Staff:** 6 DPCP staff persons who each spend a percentage of their time on the lifestyle change program (principal investigator, .1 FTE; office manager, .05 FTE; program manager, .15 FTE; quality improvement coordinator, 1.0 FTE%; epidemiologist, .25 FTE; diabetes educator, .25 FTE).
- **Funding:** Approximately \$90,000 per year to the original four sites (125 participants); \$25,000 per year to the other 11 sites (40 participants); \$6,000 per year to the site that delivers telehealth for each remote site. The State of Montana provided the majority of funding, and funding for two sites (\$50,000) was provided by the Preventive Health and Health Services Block Grant.
- **Other:** State of Montana provided funding to develop the data collection software PPS (estimated \$60,000 for initial development and \$40,000 for annual upgrades, technical assistance, and maintenance of PPS); in-kind time of members of the Diabetes Advisory Coalition.

## Implementation Challenges

- Creativity was needed to find places for weekly structured physical activity events, especially in the winter in rural areas.
- Participation and retention rates were a challenge during the monthly sessions following the core sessions.

## Implementation and Maintenance Tips

The DPCP offered several tips for successful implementation and maintenance of a lifestyle intervention program, including the following:

- **Use health care professionals as lifestyle coaches.** Registered nurses, registered dietitians, exercise specialists, and other health care professionals had expertise and experience in nutrition and physical activity as well as counseling and motivational interviewing techniques.
- **Consider DSME/T programs as a resource.** The DPCP recommended considering the role of DSME/T programs in the delivery of lifestyle education programs because their staff may have the expertise and ability to implement such programs. Sites established relationships with area health care providers to obtain appropriate referrals.
- **Use the DPP curriculum.** Use of the standardized, evidence-based curriculum ensured consistent program delivery.
- **Identify partners.** Physician champions were the most valuable partners for referrals. Health department tobacco use prevention and cardiovascular health programs increased the resources available for the DPP. The DPCP recommended collaborating with Medicaid to provide reimbursement for this preventive service.

- **Publish results.** The DPCP has published extensively on the intervention and outcomes, and recommends this to describe and evaluate the program, disseminate evidence of its success, share lessons learned, and secure continued funding and support.



## Evaluation Approach

Sites provided de-identified data to the DPCP for data analysis using PPS, which was developed in partnership with the University of North Dakota Energy & Environmental Research Center. Initial measurement of height, weight, and blood pressure was conducted by the lifestyle coaches and repeated at the conclusion of the 16-week core curriculum and at the conclusion of the entire 10-month program. Referring physicians were asked to report on blood glucose, lipid panel, and current medications at these time periods. Weight was also measured before and after each core session. Participants monitored and recorded daily fat and calorie intake, weight, and physical activity minutes. The DPCP conducted a follow-up survey to assess lifestyle change maintenance.

### Key Program Achievements

#### Process Outcomes

- Approximately 60 lifestyle coaches trained
- Of the 2,724 enrolled participants from 2008 to 2011, 1,830 (67%) completed the 16-week core curriculum

#### Health Outcomes

Among 1,830 program completers from 2008 to 2011:

- Mean of 205 minutes of physical activity per week
- 66% achieved the goal of at least 150 minutes per week of physical activity
- Average weight loss of 6.9 kg
- 47% achieved the 7% weight loss goal

Among 14 adults enrolled in the pilot telehealth intervention (compared with 13 enrolled in an onsite program):

- Similar achievement of the 7% weight loss goal (50% and 46%)



## Related References, Resources, and Tools

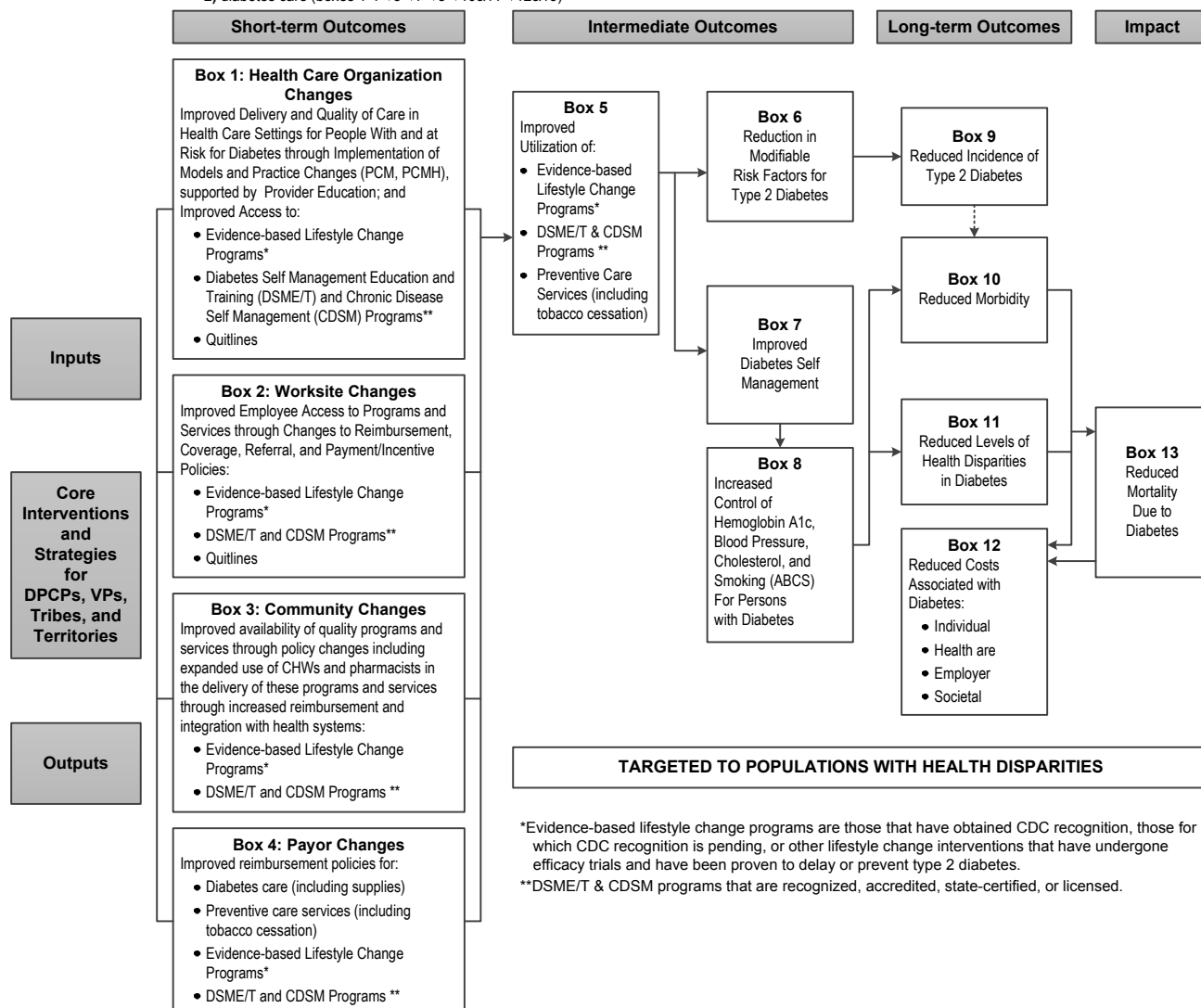
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- Tools: The DPCP will provide the data collection software to other programs free of charge.
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# APPENDIX A: LOGIC MODEL FOR DIABETES PREVENTION AND CONTROL PROGRAM GRANTEES



The DDT logic model includes two pathways:  
 1) primary prevention of diabetes (boxes 1-4→5→6→9)  
 2) diabetes care (boxes 1-4→5→7→8→10&11→12&13)



## APPENDIX B: DIABETES CORE INTERVENTIONS AND STRATEGIES TABLE



### Core Intervention #1:

**Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**

- 1.1 Support health care organizations in assessing and implementing practice changes to improve quality of care for people with and at risk for diabetes through use of the Planned Care Model and/or Patient Centered Medical Home and supported by provider education.
- 1.2 Support the implementation of policies and protocols within health care organizations that institutionalize and help sustain quality care improvements for people with diabetes/prediabetes.
- 1.3 As a complement to work occurring under Strategies 1.1–1.2, promote health communication campaigns or coalition initiatives that will contribute to improving the quality of clinical care for people with and at risk for diabetes.

### Core Intervention #2:

**Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.**

- 2.1 Expand access to one or more of the following:
  - Diabetes self-management education/training (DSME/T) programs that meet national standards and demonstrate improved behavioral and/or clinical outcomes for people with diabetes (e.g., American Diabetes Association–recognized or American Association of Diabetes Educators–accredited DSME/T programs)
  - Diabetes or chronic disease self-management support (CDSM) programs (e.g., Stanford Chronic Disease Self-Management or Diabetes Self-Management programs) that demonstrate improved behavioral and/or quality-of-life outcomes for people with diabetes.
- 2.2 Support efforts to promote the sustainability of DSME/T or CDSM programs (e.g., Medicaid reimbursement for DSME/T or CDSM programs, bundled reimbursement)
- 2.3 Implement evidence-based programs and policies within worksites that contribute to improved control of A1C, blood pressure, and cholesterol, and promote tobacco cessation among people with diabetes.
- 2.4 Increase access to tobacco cessation services (e.g., quitlines) for adult tobacco users with diabetes.

- 2.5 Expand the role of allied health professionals by replicating and scaling evidence-based programs founded on the principles of the Asheville Project and the Diabetes 10-City Challenge.
- 2.6 Support efforts to promote the sustainability of community health workers involved in providing self-management education and support services for people with diabetes.
- 2.7 As a complement to work occurring under Strategies 2.1–2.6, promote health communication campaigns or coalition initiatives that will contribute to increasing access to sustainable self-management education and support services for people with diabetes

### **Core Intervention #3:**

**Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.**

- 3.1 Lead/coordinate CDC-approved health communication and marketing campaigns or coalition initiatives that raise awareness among people at high risk of the following:
  - Prediabetes risk factors
  - The location of sites offering lifestyle change programs that have achieved CDC recognition (or pending recognition)
  - How to enroll in these lifestyle change programs
- 3.2 Work with health care providers to:
  - Raise awareness of how to recognize and treat prediabetes, and
  - Implement systems for referral of people with prediabetes or multiple type 2 diabetes risk factors to sites offering lifestyle change programs that have achieved CDC recognition (or pending recognition).
- 3.3 Partner with state and local government agencies to recommend that CDC-recognized lifestyle change programs be offered as a covered benefit for public employees and/or Medicaid recipients to prevent or delay onset of type 2 diabetes.
- 3.4 Lead/coordinate use of National Diabetes Education Program primary prevention tools with targeted populations at high risk for developing type 2 diabetes to increase awareness of and support lifestyle change behaviors. (Note: This strategy is appropriate where a community does not yet have the capacity to offer programs that qualify for CDC recognition but wants to raise awareness of and support lifestyle change behaviors. These tools are not a substitute for the National Diabetes Prevention Program evidence-based lifestyle intervention.)
- 3.5 As a complement to work occurring under Strategies 3.1–3.4, support other chronic disease prevention programs in implementing environmental approaches that address modifiable risk factors for type 2 diabetes (e.g., worksite policies that promote increased physical activity).



# APPENDIX C: METHODS TO SELECT AND DESCRIBE DIABETES PREVENTION AND CONTROL PROGRAMS



## Program Selection

An internal workgroup in the Division of Diabetes Translation (DDT), with input from all Program and Evaluation Branch (PEB) team leads, selected DDT-funded programs for review as candidates for this compendium. The workgroup was tasked with prioritizing programs in each of six evidence-based programmatic categories: Planned Care Model, Diabetes Self-Management Education, Chronic Disease Self-Management Program, Lifestyle Interventions, Health Promotion and Awareness, and Reimbursement. The programs were later mapped to the appropriate Core Intervention and Strategy.

After examining multiple data sources, including grantee reports, technical assistance documentation, and state evaluation plans, the workgroup developed a list of candidate program summaries and validated the list with lead project officers familiar with the state programs. The project officers also populated any missing data. DDT made every effort to select only programs with some level of data from implementation or outcome evaluation. DDT also selected at least one state program from each of the 10 public health geographic regions in the United States. The final sample consisted of 26 programs implemented by 20 different DDT grantees.

## Data Collection

DDT's contractor, RTI International, developed domains for the interview guide drawing from the RE-AIM model (<http://www.re-aim.org>) as well as criteria developed by the Office of State, Tribal, Local, and Territorial Support, to identify best practices for public health interventions. A master interview guide with core questions under each domain was developed and piloted with one state. Tailored interview guides were then created for each evidence-based program category (e.g., Planned Care Model, Diabetes Self-Management Education, Chronic Disease Self-Management Program, Lifestyle Interventions, Health Promotion and Awareness, and Reimbursement).

### Interview Guide Domains

- Description of DPCP, Practice, or Policy
- Strategies for Effective Start-up and Implementation
- Impact and Outcomes
- Reach, Adoption, and Transferability
- Feasibility
- Sustainability
- Recommendations

RTI interviewed DPCP program coordinators and other designated staff. Prior to recruiting programs, RTI obtained Institutional Review Board approval. Program staff were recruited to participate by e-mail and telephone. Prior to the interviews, RTI staff reviewed state documents and completed a state profile form that summarized existing data according to the interview guide domains. Each interview lasted 60 minutes and was audio recorded. After the interview, the moderator and note-taker reviewed the audio recording to complete the notes.

RTI and DDT collaborated to design a compendium entry template that reflected the interview guide domains and represented the important components of the intervention. RTI staff used the interview notes to populate the compendium entries. The compendium entries were reviewed by DDT program officers and the state interview participants for accuracy and to provide additional or missing data.

## APPENDIX D: GLOSSARY



### A1C

A1C is a blood test that is used to measure a person's average blood glucose level over the past 2 to 3 months.

### Certified Diabetes Educator

Certified diabetes educators are educated and licensed health care professionals, including registered nurses, registered dietitians, pharmacists, and individuals who work in any one of a number of specialty areas and possess distinct and specialized knowledge in diabetes self-management education.

### Chronic Disease Self-Management Program (CDSMP)

CDSMP is an effective self-management education program for people with chronic health problems. The program specifically addresses arthritis, diabetes, lung, and heart disease, but teaches skills useful for managing a variety of chronic diseases. This program was developed at Stanford University. CDSMP workshops are held in community settings and meet 2.5 hours per week for 6 weeks. Workshops are facilitated by two trained leaders, one or both of whom are non-health professionals who have a chronic disease. The program covers topics such as techniques to deal with problems associated with chronic disease; appropriate exercise; appropriate use of medications; communicating effectively with family, friends, and health professionals; nutrition; and how to evaluate new treatments. Participants who completed CDSMP demonstrated significant improvements in exercise; ability to do social and household activities; less depression, fear, and frustration or worry about their health; reduction in symptoms like pain; and increased confidence in their ability to manage their condition. For the purposes of DDT indicators, the term CDSMP refers to licensed programs. <http://patienteducation.stanford.edu/programs/cdsmp.html>

### Community Health Worker (CHW)

CHWs are frontline public health workers who are trusted members of and/or have an unusually close understanding of the community served. This trusting relationship enables CHWs to serve as liaisons, links, or intermediaries between health/social services and the community to facilitate access to services and improve the quality and cultural competencies of service delivery. CHWs also build individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, and social support.

### Core Intervention

CDC/DDT defined a set of three effective, evidence-based interventions that have the greatest potential for reach and measurable impact for people with and at risk for diabetes:

- **Core Intervention #1:** Improve quality of clinical care for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.
- **Core Intervention #2:** Increase access to sustainable self-management education and support services for populations with greatest diabetes burden and risk to improve control of A1C, blood pressure, and cholesterol, and to promote tobacco cessation.

- **Core Intervention #3:** Increase use of lifestyle change programs that have achieved CDC recognition (or pending recognition) to prevent or delay onset of type 2 diabetes among people at high risk.

### **Diabetes Prevention and Control Program (DPCP)**

The DPCPs are state-based programs funded by the Centers for Disease Control and Prevention's Division of Diabetes Translation (DDT) to implement evidence-based programs, policies, and practices for diabetes prevention and control.

### **DSME/T: Diabetes Self-Management Education (DSME) or Diabetes Self-Management Training (DSMT)**

Diabetes self-management education/training (DSME/T) is defined as the ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. This process incorporates the needs, goals, and life experiences of the person with diabetes and is guided by evidence-based standards. The overall objectives of DSME/T are to support informed decision making, self-care behaviors, problem solving, and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life ([http://care.diabetesjournals.org/content/34/Supplement\\_1/S89.long](http://care.diabetesjournals.org/content/34/Supplement_1/S89.long)). For the purposes of DDT indicators, the term DSME/T programs refers to programs that are accredited, recognized, or state-certified.

### **Full-Time Equivalent (FTE)**

An FTE represents one employee working full time.

### **Patient-Centered Medical Home**

The Patient Centered Medical Home facilitates partnerships between individual patients and their personal physicians, and when appropriate, the patient's family. Care is facilitated by registries, information technology, health information exchange, and other means to assure that patients get the indicated care when and where they need and want it in a culturally and linguistically appropriate manner.

Core features include a physician-directed medical practice with a personal doctor for every patient, the capacity to coordinate high-quality accessible care, and payments that recognize a medical home's added value for patients. The approach enjoys support from policymakers, employers, physicians, patients, and insurers as a means to improve the way health care is delivered while controlling rising health care costs.

### **Payor**

A payor is one who pays or who is to make a payment; particularly one who is to make payment of a bill or note. A payor includes public and private insurers, health plans, and employers.

### **Planned Care Model (or Chronic Care Model)**

The Planned Care Model identifies the essential elements of a health care system that encourage high-quality chronic disease care. These elements are the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise.

## **Prediabetes or at High Risk for Type 2 Diabetes**

Prediabetes occurs when a person's blood glucose levels are higher than normal but not high enough to be diagnosed as diabetes. It is diagnosed by a fasting plasma glucose test, oral glucose tolerance test, or an A1C test. Persons with prediabetes are at high risk of developing type 2 diabetes. Additionally, persons may be identified as being at high risk for type 2 diabetes based on the results of a validated diabetes risk test such as the CDC Prediabetes Screening Test. (<http://www.cdc.gov/diabetes/prevention/prediabetes.htm>).

## **Quality Improvement Process**

Quality improvement is the process of creating beneficial change and enhanced performance in an organization or system. Effective quality improvement efforts in clinical settings include supporting compliance with evidence-based guidelines for diabetes care through provider education, reminders, quality recognition, and service reimbursement.

## **Registry/Electronic Health Record**

A registry/electronic health record (EHR) is an electronic database of clinical and other information critical to evaluating diabetes care processes and outcomes. A registry/EHR should at minimum enable routine assessment of outcomes and population-based care management; ideally the registry/EHR should also generate outputs that facilitate care delivery and coordination at the individual patient level.

## **Self-Management Support**

Self-management support is the systematic provision of education and supportive interventions by staff to increase patients' skills and confidence in managing their health problems, including regular assessment of progress and problems, goal setting, and problem-solving support.

## **Smoking Cessation**

Smoking cessation is the act of stopping or quitting tobacco use. Counseling and pharmacologic therapies are common methods used to help individuals stop smoking.

## **Strategy**

Strategies are activities that contribute to successful implementation or enactment of the program, practice, or policy. For example, "Support efforts to promote the sustainability of DSME/T or CDSM programs (e.g., Medicaid reimbursement for DSME/T or CDSM programs, bundled reimbursement)."